BEFORE

THE PUBLIC SERVICE COMMISSION OF

SOUTH CAROLINA

LOCKHART POWER COMPANY

Docket No. 2013-378-E

Direct Testimony

of

Paul R. Moul, Managing Consultant
P. Moul & Associates

Concerning

Cost of Equity

Lockhart Power Company
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DIRECT TESTIMONY OF PAUL R. MOUL

1   **INTRODUCTION AND SUMMARY OF RECOMMENDATIONS**

2   Q.   **Please state your name, business address, and occupation.**

3   A.   My name is Paul Ronald Moul. My business address is 251 Hopkins Road, Haddonfield,

4   NJ 08033-3062. I am Managing Consultant at the firm P. Moul & Associates, an

5   independent, financial, and regulatory consulting firm. My educational background,

6   business experience, and qualifications are provided in Appendix A that follows my direct

7   testimony.

8   Q.   **What is the purpose of your testimony?**

9   A.   My testimony presents evidence, analysis, and a recommendation concerning the

10   appropriate rate of return on common equity that the Public Service Commission of South

11   Carolina ("PSC" or the "Commission") should recognize in the determination of the

12   revenues that Lockhart Power Company ("Lockhart" or the "Company") should realize as

13   a result of this proceeding. My analysis and recommendation is supported by the detailed

14   financial data contained in Exhibit No. PRM-1, which is a multi-page document divided

15   into fourteen (14) schedules.

16   Q.   **Based upon your analysis, what is your conclusion concerning the appropriate rate of**

17   **return on common equity for the Company in this case?**

18   A.   My conclusion is that the Company should be afforded an opportunity to earn a rate of

19   return on common equity of 12.00%. When applied to the Company's rate base, this rate

20   of return will compensate investors for the use of their capital.

21   Q.   **How have you determined the rate of return on common equity in this case?**

22   A.   In arriving at my recommended rate of return on common equity, I employed capital

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1   market and financial data relied upon by investors to assess the relative risk, and hence the

2   cost of equity, for an electric utility, such as the Company. In this regard, I relied on four

3   well-recognized measures of the cost of equity: the Discounted Cash Flow ("DCF")

4   model, the Risk Premium analysis, the Capital Asset Pricing Model ("CAPM"), and the

5   Comparable Earnings approach. By considering the results of a variety of approaches, I

6   determined that a reasonable rate of return on common equity is 12.00%. The testimony

7   of Mr. Bryan D. Stone explains the many initiatives that the Company has taken to provide

8   reasonably priced energy to its customers through reinvestment in its business.

9 Q. **In your opinion, what factors should the Commission consider when setting**

10   **Lockhart's rate of return in this proceeding?**

11 A. The Commission's rate of return allowance must be set to provide the Company with a

12   reasonable level of earnings, produce an adequate level of internally generated funds to

13   meet capital requirements, be commensurate with the risk to which the Company's capital

14   is exposed, assure confidence in the financial integrity of the Company, support reasonable

15   credit quality, and allow the Company to raise capital on reasonable terms. The return that

16   I propose fulfills these established standards of a fair rate of return set forth by the

17   landmark Bluefield and Hope cases.[1] That is to say, my proposed rate of return is

18   commensurate with returns available on investments having corresponding risks.

19 Q. **How have you performed your cost of equity analysis?**

20 A. The models that I used to measure the rate of return on common equity for the Company

21   were applied with market and financial data developed from a proxy group of eleven (11)

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[1]Bluefield Water Works & Improvement Co. v. P.S.C. of West Virginia, 262 U.S. 679 (1923) and F.P.C. v. Hope
Natural Gas Co., 320 U.S. 591 (1944).

1   companies that own electric utilities. The companies in the proxy group are identified on

2   page 2 of Schedule 3. I will refer to these companies as the "Electric Group" throughout

3   my testimony. I have applied the models/methods for estimating the cost of equity using

4   the average data for the Electric Group. The use of a group average (or portfolio) of

5   utilities will reduce the effect that anomalous results for an individual company may have

6   on the rate of return determination.

7   **Q.   Please summarize your cost of equity analysis for the Electric Group.**

8   A.   My cost of equity determination was derived from the results of the methods/models

9   identified above. In general, the use of more than one method provides a superior

10   foundation to arrive at the cost of equity. The following tabulation taken from the

11   application of each of the models shown on Schedule 1 provides a summary of the

12   indicated costs of equity using each of these approaches.

DCF	9.22%
Risk Premium	12.43%
CAPM	9.65%
Comparable Earnings	14.25%
Average	11.39%
Median	11.04%
Mid-point	11.74%

13   From all these measures, the rate of return on common equity developed from the Electric

14   Group data is 11.39%, which is the average of all of these methods. To accommodate the

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[2] Flotation costs are defined as the out-of-pocket costs associated with the issuance of common stock. Those costs typically consist of the underwriters' discount and company issuance expenses.

1   unique risk characteristics of Lockhart, I adjusted the results of the Electric Group. The

2   two adjustments that I propose were intended to recognize the lack of debt in the

3   Company's capital structure and the small size of Lockhart as compared to the Electric

4   Group. I determined that the Company's allowed rate of return on common equity should

5   be set at 12.00% after the application of these adjustments. The details are provided on

6   Schedule 1.

ELECTRIC UTILITY RISK FACTORS

8 Q. **What background information have you considered in analyzing the Company's rate**

9   **of return on common equity?**

10 A. Lockhart is a very small electric utility. It is a wholly-owned subsidiary of Pacolet

11   Milliken Enterprises, Inc. In the year 2012, the Company had just 6,264 retail customers

12   and had only __ employees **[need to complete]**. The Company has realized a net loss of

13   87 customers since its 2011 rate case **[check to confirm]**. In 2012, the Company's direct

14   sales (excluding sales for resale) were represented by approximately 35% to residential,

15   11% to commercial, and 54% to industrial customers. Sales to the Company's industrial

16   customers have recovered somewhat since the end of the Great Recession. Its industrial

17   sales continue to be strongly influenced by textile manufacturing. While representing 54%

18   of direct electric sales, there are only nine (9) industrial customers. This means that the

19   energy needs of a few customers have a significant impact on the Company's operations.

20   The Company also has one sale for resale customer that represents approximately 52% of

21   total megawatt hour sales. In 2012, the Company generated approximately 17% of its

22   energy from run-of-the-river hydroelectric facilities, generated 3% from its internal

4

1   combustion peak-shaving generation and landfill gas generation, and purchased 80% of its

2   electric requirements from Duke Energy of the Carolinas ("Duke").

3   **Q. Please discuss some of the risk issues for electric utilities.**

4   A. The Energy Policy Act of 2005 highlights the emphasis being placed upon the reliability

5   and structure of the electric utility industry. Aside from their traditional responsibility to

6   supply adequate capacity to meet forecast loads amid growing uncertainties due to global

7   warming and conservation, increased competitive risks now exist for electric utilities.

8   Until 2005, 100% of the Company's generation was renewable hydro-electric energy, and

9   as a consequence, the Company did not face any environmental risk directly. However,

10   environmental compliance costs could potentially impact the Company's cost of purchased

11   power. While the cost of purchased power is recovered through a tracking mechanism,

12   higher purchased power costs make the Company's electric rates less competitive. In

13   addition, globalization facing its large industrial customers has a significant impact on the

14   Company's sales to these customers.

15 **Q. Are there other specific risk issues facing the Company?**

16 A. Yes. Its risk profile is strongly influenced by electricity sold to industrial customers. In

17   the industrial class of customers, the Company's business profile is dominated by textile

18   and textile related industries. Sales to high volume customers are usually thought to be of

19   higher risk than sales to other classes of customers. Success in this segment of the

20   Company's market is subject to (i) the business cycle, (ii) the price of alternative energy

21   sources, and (iii) pressures from alternative providers. In the textile industry, foreign

22   competition has dimmed the outlook for this industry. Moreover, external factors can also

5

1   influence the Company's sales to these customers which face competitive pressures on

2   their own operations from other facilities outside the Company's service territory. The

3   risk associated with serving industrial customers engaged in the textile and textile related

4   industries can also have a ripple effect on other classes of customers. That is to say, sales

5   to residential and commercial customers can also be impacted by plant closures that may

6   occur.

7 Q. **Please indicate how the Company's risk profile is affected by its construction**

8   **program.**

9 A. Lockhart is faced with the requirement to undertake investment to maintain and upgrade

10   existing facilities in its service territory and to maintain system reliability. Over the past

11   three years the Company has invested in the Upper Pacolet Hydroelectric facility, the

12   Lockhart Minimum Flow Unit Hydroelectric Project, the Lower Pacolet Hydroelectric

13   facility, and Columbia Canal Hydroelectric facility. In the aggregate these facilities will

14   add ___ megawatts to the Company's generation portfolio **[need to complete]**.

15   Lockhart's capital expenditures are currently expected to total approximately $47 million

16   over the 2013-2022 period, which exceeds its current net utility plant. In order to fund

17   recent substantial capital expenditures, the Company's parent (Pacolet Milliken

18   Enterprises, Inc.) has elected to forego any dividends since the year 2005. Further, in

19   2012, it made a $5 million capital contribution (initially in the form of a loan, but later

20   converted to equity) to Lockhart.

21 Q. **Please summarize your risk assessment of Lockhart?**

22 A. Lockhart's business risk profile is dominated by:

1   •   Its very small size.
2   •   Low growth in its service territory
3   •   Limited diversity in its service territory
4   •   A service area whose economy is highly dependent upon the
5   textile and textile related industries.
6   •   Heavy reliance upon purchased power to meet the energy
7   requirements of its customers.
8   •   Its large capital expenditures.

9   Based upon these factors, the Company's business risk is high. To help mitigate these

10   business risk factors, the Company's financial profile consists of 100% equity.

11   <center>**FUNDAMENTAL RISK ANALYSIS**</center>

12   **Q.** **Is it necessary to conduct a fundamental risk analysis to provide a framework for a**

13   **determination of a utility's cost of equity?**

14   A. Yes. It is necessary to establish a company's relative risk position within its industry

15   through a fundamental analysis of various quantitative and qualitative factors that bear

16   upon investors' assessment of overall risk. The qualitative factors which bear upon the

17   Company's risk have already been discussed. The quantitative risk analysis follows. For

18   this purpose, I have utilized the S&P Public Utilities, an industry-wide proxy consisting of

19   various regulated businesses, and the Electric Group.

20   **Q.** **What are the components of the S&P public utilities?**

21   A. The S&P Public Utilities is a widely recognized index that is comprised of electric power

22   and natural gas companies. These companies are identified on page 3 of Schedule 4. I

23   have used this group as a broad-based measure of all types of utility companies.

24   **Q.** **What criteria did you employ to assemble the Electric Group?**

25   A. The Electric Group that I employed in this case includes companies that are engaged in

26   similar business lines, have publicly-traded common stock, are reported in The Value Line

<center>7</center>

1   Investment Survey, operate within the southeastern and south central regions of the U.S.,

2   and are not currently the target of a merger or acquisition. The Electric Group includes

3   American Electric Power Company, CenterPoint Energy, Inc., Cleco Corporation,

4   Dominion Resources, Inc., Duke Energy Corp., Entergy Corp., NextEra Energy, Inc.,

5   OGE Energy Corp., SCANA Corp., Southern Company, and TECO Energy. The Electric

6   Group members are identified on page 2 of Schedule 3.

7 Q. **Is knowledge of a utility's bond rating an important factor in assessing its risk and**

8   **cost of capital?**

9 A.   Yes. Knowledge of a company's credit quality rating is important because the cost of each

10   type of capital is directly related to the associated risk of the firm. So while a company's

11   credit quality risk is shown directly by the credit rating and yield on its bonds, these

12   relative risk assessments also bear upon the cost of equity. This is because a firm's cost of

13   equity is represented by its borrowing cost plus compensation to recognize the higher risk

14   of an equity investment compared to debt.

15 Q. **How do the bond ratings compare for the Electric Group and the S&P Public**

16   **Utilities?**

17 A.   For the Electric Group, the Long Term ("LT") issuer rating is Baa1 from Moody's

18   Investors Services ("Moody's") and the corporate credit rating ("CCR") is a BBB+ from

19   Standard and Poor's Corporation ("S&P"). The CCR designation by S&P and LT issuer

20   rating by Moody's focuses upon the credit quality of the issuer of the debt, rather than

21   upon the debt obligation itself. For the S&P Public Utilities, the average composite rating

22   is Baa1 by Moody's and BBB+ by S&P. Many of the financial indicators that I will

1   subsequently discuss are considered during the rating process.

2 Q. **How do the financial data compare for Lockhart, the Electric Group, and the S&P**

3   **Public Utilities?**

4 A. The broad categories of financial data that I will discuss are shown on Schedules 2, 3 and

5   4. The data cover the five-year period 2008-2012. For the purpose of my analysis, I have

6   analyzed the historical results for Lockhart, the Electric Group, and the S&P Public

7   Utilities. I will highlight the important categories of relative risk as follows:

8   Size. In terms of capitalization, Lockhart is several orders of magnitude smaller

9   than the average size of the Electric Group and the S&P Public Utilities. Indeed the

10   Company's capitalization is about $41 million as compared to approximately $27 billion

11   for the Electric Group and approximately $22 billion for the S&P Public Utilities. All

12   other things being equal, a smaller company is riskier than a larger company because a

13   given change in revenue and expense has a proportionately greater impact on a small firm.

14   As I will demonstrate later, the size of a firm impacts its cost of equity. This is the case

15   for Lockhart. Indeed, the Company is only 0.15% of the average size of the Electric

16   Group. Such small size significantly elevates the Company's risk profile and increases its

17   required return.

18   Market Ratios. Market-based financial ratios provide a partial indication of the

19   investor-required cost of equity. If all other factors are equal, investors will require a

20   higher return on equity for companies that exhibit greater risk, in order to compensate for

21   that risk. That is to say, a firm that investors perceive to have higher risks will experience

9

1   a lower price per share in relation to expected earnings.[3]

2   There are no market ratios available for Lockhart. The five-year average price-

3   earnings multiple was somewhat higher for S&P Public Utilities as compared to the

4   Electric Group. The five-year average dividend yield was similar for the Electric Group,

5   and the S&P Public Utilities. The five-year average market-to-book ratio was somewhat

6   higher for the Electric Group as compared to the S&P Public Utilities.

7   Common Equity Ratio. The level of financial risk is measured by the proportion of

8   long-term debt and other senior capital that is contained in a company's capitalization.

9   Financial risk is also analyzed by comparing common equity ratios (the complement of the

10   ratio of debt and other senior capital). That is to say, a firm with a high common equity

11   ratio has lower financial risk, while a firm with a low common equity ratio has higher

12   financial risk. Lockhart employs no borrowed capital in its capitalization, and hence has

13   no financial risk. The five-year average common equity ratios, based on permanent

14   capital, were 43.0% for the Electric Group and 45.0% for the S&P Public Utilities.

15   Return on Book Equity. Greater variability (i.e., uncertainty) of a firm's earned

16   returns signifies relative levels of risk, as shown by the coefficient of variation (standard

17   deviation ÷ mean) of the rate of return on book common equity. The higher the

18   coefficients of variation, the greater degree of variability. For the five-year period, the

19   coefficients of variation were 0.141 (1.4% ÷ 9.9%) for Lockhart, 0.132 (1.6% ÷ 12.1%) for

20   the Electric Group, and 0.104 (1.1% ÷ 10.6%) for the S&P Public Utilities. The earnings

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[3]For example, two otherwise similarly situated firms each reporting $1.00 in earnings per share would have different market prices at varying levels of risk (i.e., the firm with a higher level of risk will have a lower share value, while the firm with a lower risk profile will have a higher share value).

1   variability for Lockhart must be viewed in the context of its capital structure that contains

2   no borrowed funds. The lack of borrowed funds by Lockhart mandates lower earnings

3   variability as compared to other companies that use debt in their capital structure. It

4   should be emphasized that Lockhart's average achieved return of 9.9% is both well below

5   its authorized return of 12.0%, and is well below the average achieved return of 12.1% for

6   the Electric Group. The Company's earned return deficiency heightens its risk.

7   Operating Ratios. I have also compared operating ratios (the percentage of

8   revenues consumed by operating expense, depreciation, and taxes other than income).[4]

9   The five-year average operating ratios were 84.6% for Lockhart, 80.9% for the Electric

10   Group, and 82.3% for the S&P Public Utilities. These comparisons show higher operating

11   risk for Lockhart as compared to the Electric Group and the S&P Public Utilities.

12   Lockhart's higher operating ratio can be traced to the significant role that purchased power

13   has on its operations. With a majority of its energy requirements provided by another

14   utility, the Company must rely upon Duke to provide much of the energy needs for its

15   customers. In the hierarchy of claims on the Company's revenues, Duke (i.e., the

16   wholesaler) obtains recovery of its fixed costs prior to the realization of a return for

17   Lockhart (i.e., the retailer). The Company does have the ability to recover its purchased

18   power costs through the PPA Clause. Hence, the investor in the retail business is

19   subordinate to the contractual payments to the wholesaler. That is to say, the fixed costs

20   of the wholesaler become operating costs of the retailer.

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[4]The complement of the operating ratio is the operating margin which provides a measure of profitability. The
higher the operating ratio, the lower the operating margin.

1   Coverage. The level of fixed charge coverage (i.e., the multiple by which available

2   earnings cover fixed charges, such as interest expense) provides an indication of the

3   earnings protection for creditors. Higher levels of coverage, and hence earnings protection

4   for fixed charges, are usually associated with superior grades of creditworthiness. The

5   five-year average interest coverage (excluding AFUDC) was 3.23 for the Electric Group

6   and 3.12 times for the S&P Public Utilities. Coverage calculations are not meaningful for

7   Lockhart.

8   Quality of Earnings. Measures of earnings quality usually are revealed by the

9   percentage of Allowance for Funds Used During Construction ("AFUDC") related to

10   income available for common equity, the effective income tax rate, and other cost

11   deferrals.   These measures of earnings quality usually influence a firm's internally

12   generated funds because poor quality of earnings would not generate high levels of cash

13   flow. Quality of earnings has not been a significant concern for Lockhart, which does not

14   record AFUDC, the Electric Group, and the S&P Public Utilities.

15   Internally Generated Funds. Internally generated funds ("IGF") provide an

16   important source of new investment capital for a utility and represent a key measure of

17   credit strength.   Historically, the five-year average percentage of IGF to capital

18   expenditures was 119.0% for Lockhart, 82.3% for the Electric Group, and 91.1% for the

19   S&P Public Utilities. As a small privately held company, the Company has demonstrated

20   the ability and willingness to manage its dividend payments so its IGF covers its

21   construction requirements. Indeed, Lockhart has not paid a common dividend since 2005,

22   thereby enhancing its IGF. The ability to manage dividend payments in response to

1   capital expenditures is a situation not common for larger electric utilities with publicly-

2   traded stock. It is important to note that during the years 2011 and 2012 high capital

3   requirements associated with the new hydroelectric projects that I described previously

4   caused a significant decline in the IGF percentage for the Company. Indeed, the IGF

5   percentage for Lockhart was just 37.0% in 2011 and 75.7% in 2012.

6   <u>Betas</u>. The financial data that I have been discussing relate primarily to company-

7   specific risks. Market risk for firms with publicly-traded stock is measured by beta

8   coefficients. Beta coefficients attempt to identify systematic risk, i.e., the risk associated

9   with changes in the overall market for common equities. [5] <u>Value Line</u> publishes such a

10   statistical measure of a stock's relative historical volatility to the rest of the market. A

11   comparison of market risk is shown by the <u>Value Line</u> beta of .69 as the average for the

12   Electric Group (see page 2 of Schedule 3), and .75 as the average for the S&P Public

13   Utilities (see page 3 of Schedule 4).

14   **Q.   Please summarize your risk evaluation of Lockhart and the Electric Group.**

15   A.   Lockhart is several orders of magnitude smaller than the average size of the Electric

16   Group. The Company also possesses higher operating risk than the Electric Group. As a

17   mitigating risk factor, Lockhart lacks any financial risk because its common equity ratio is

18   100%. The Company's retail customer base is dominated by a large proportion of sales to

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[5] Beta is a relative measure of the historical sensitivity of the stock's price to overall fluctuations in the New York Stock Exchange Composite Index. The "Beta coefficient" is derived from a regression analysis of the relationship between weekly percentage changes in the price of a stock and weekly percentage changes in the NYSE Index over a period of five years. The betas are adjusted for their long-term tendency to converge toward 1.00. A common stock that has a beta less than 1.0 is considered to have less systematic risk than the market as a whole and would be expected to rise and fall more slowly than the rest of the market. A stock with a beta above 1.0 would have more systematic risk.

1   few industrial customers, many of which are engaged in textile manufacturing and related

2   industries. The Company's capital expenditures are also expected to be relatively large in

3   the future. Overall, the fundamental risk factors indicate that the Electric Group is useful

4   in measuring the Company's cost of equity, when Lockhart's unique risk traits are taken

5   into account.

COST OF EQUITY – GENERAL APPROACH

7   Q.   **Please describe the process you employed to determine the cost of equity for the**

8   **Company.**

9   A.   Although my fundamental financial analysis provides the required framework to establish

10   the risk relationships between Lockhart, the Electric Group, and the S&P Public Utilities,

11   the cost of equity must be measured by standard financial models that I identified above.

12   Differences in risk traits, such as size, business diversification, geographical diversity,

13   regulatory policy, financial leverage, and bond ratings must be considered when analyzing

14   the cost of equity.

15   It is also important to reiterate that no one method or model of the cost of equity

16   can be applied in an isolated manner. Rather, informed judgment must be used to take into

17   consideration the relative risk traits of the firm. It is for this reason that I have used more

18   than one method to measure the Company's cost of equity. As I describe below, each of

19   the methods used to measure the cost of equity contains certain incomplete and/or overly

20   restrictive assumptions and constraints that are not optimal. Therefore, I favor considering

21   the results from a variety of methods.   In this regard, I applied each of the methods with

22   data taken from the Electric Group and have arrived at a cost of equity of 11.39%. With

1   this cost of equity as a foundation, I determined that a 12.00% rate of return on common

2   equity is appropriate for Lockhart, after recognizing the Company's 100% common equity

3   ratio and its very small size.

DISCOUNTED CASH FLOW ANALYSIS

5   **Q.   Please describe your use of the Discounted Cash Flow approach to determine the cost**

6   **of equity.**

7   A.   The DCF model seeks to explain the value of an asset as the present value of future

8   expected cash flows discounted at the appropriate risk-adjusted rate of return. In its

9   simplest form, the DCF return on common stock consists of a current cash (dividend) yield

10   and future price appreciation (growth) of the investment. The dividend discount equation

11   is the familiar DCF valuation model and assumes future dividends are systematically

12   related to one another by a constant growth rate. The DCF formula is derived from the

13   standard valuation model: $P = D/(k-g)$, where P = price, D = dividend, k = the cost of

14   equity, and g = growth in cash flows. By rearranging the terms, we obtain the familiar

15   DCF equation: $k = D/P + g$. All of the terms in the DCF equation represent investors'

16   assessment of expected future cash flows that they will receive in relation to the value that

17   they set for a share of stock (P). The DCF equation is sometimes referred to as the

18   "Gordon" model.[6] My DCF results are provided on Schedule 1 for the Electric Group.

19   The DCF return is 9.04% prior to flotation costs and 9.22% including flotation costs.

20   Among other limitations of the model, there is a certain element of circularity in

21   the DCF method when applied in rate cases. This is because investors' expectations for

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[6] Gordon, Gordon and Gould, "Choice Among Methods of Estimating Share Yield," The Journal of Portfolio Management (Spring 1989).

1   the future depend upon regulatory decisions. In turn, when regulators depend upon the

2   DCF model to set the cost of equity, they rely upon investor expectations that include an

3   assessment of how regulators will decide rate cases. Due to this circularity, the DCF

4   model may not fully reflect the true risk of a utility.

5 Q. **Please explain the dividend yield component of a DCF analysis.**

6 A. The DCF methodology requires the use of an expected dividend yield to establish the

7   investor-required cost of equity. The monthly dividend yields for the twelve months

8   ended July 2013 are shown on Schedule 5 and capture an adjustment to the month-end

9   prices to reflect the buildup of the dividend in the price that has occurred since the last ex-

10   dividend date (i.e., the date by which a shareholder must own the shares to be entitled to

11   the dividend payment – usually about two to three weeks prior to the actual payment).

12   For the twelve months ended July 2013, the average dividend yield was 4.03% for

13   the Electric Group based upon a calculation using annualized dividend payments and

14   adjusted month-end stock prices. The dividend yields for the more recent six- and three-

15   month periods were 3.93% and 3.97%, respectively. I have used, for the purpose of the

16   DCF model, the six-month average dividend yield of 3.93% for the Electric Group. The

17   use of this dividend yield will reflect current capital costs, while avoiding spot yields. For

18   the purpose of a DCF calculation, the average dividend yield must be adjusted to reflect

19   the prospective nature of the dividend payments, i.e., the higher expected dividends for the

20   future. Recall that the DCF is an expectational model that must reflect investor anticipated

21   cash flows for the Electric Group. I have adjusted the six-month average dividend yield in

22   three different, but generally accepted, manners and used the average of the three adjusted

16

1   values as calculated in the lower panel of data presented on Schedule 5. That adjusted

2   dividend yield is 4.04% for the Electric Group.

3 **Q. Please explain the underlying factors that influence investors' growth expectations.**

4 A. As noted previously, investors are interested in the future growth of their investment (i.e.,

5   the cash and stock appreciation realized). Future earnings per share growth represent a

6   key issue for them because under the constant price-earnings multiple assumption of the

7   DCF model, the price per share of stock will grow at the same rate as earnings per share.

8   In conducting a growth rate analysis, a wide variety of variables can be considered when

9   reaching a consensus of prospective growth. The variables that can be considered include:

10   earnings, dividends, book value, and cash flow stated on a per share basis. Historical

11   values for these variables can be considered, as well as analysts' forecasts that are widely

12   available to investors. A fundamental growth rate analysis can also be formulated, which

13   consists of internal growth ("$b \times r$"), where "r" represents the expected rate of return on

14   common equity and "b" is the retention rate that consists of the fraction of earnings that

15   are not paid out as dividends. The internal growth rate can be modified to account for

16   sales of new common stock -- this is called external growth ("$s \times v$"), where "s" represents

17   the new common shares expected to be issued by a firm and "v" represents the value that

18   accrues to existing shareholders from selling stock at a price different from book value.

19   Fundamental growth, which combines internal and external growth, provides an

20   explanation of factors that cause book value per share to grow over time.

21   Growth can also be expressed in multiple stages. This expression of growth

22   includes a "growth" stage where a firm enjoys rapidly expanding markets, high profit

1   margins, and robust growth in earnings per share. Thereafter, a firm enters a "transition"

2   stage where fewer technological advances and increased product saturation begins to

3   reduce the growth rate and profit margins come under pressure. During the "transition"

4   phase, investment opportunities begin to mature, capital requirements decline, and a firm

5   begins to pay out a larger percentage of earnings to shareholders. Subsequently, the

6   mature or "steady-state" stage is reached when a firm's earnings growth, payout ratio, and

7   return on equity stabilize at levels where they remain for much of the life of the firm. The

8   three stages of growth assume a step-down of high growth to lower sustainable growth.

9   Even if these three stages of growth can be envisioned for a firm, the third "steady-state"

10   growth stage, which is assumed to remain fixed in perpetuity, represents an unrealistic

11   expectation because the three stages of growth can be repeated. That is to say, the stages

12   can be repeated where growth for a firm ramps up and ramps down in cycles over time.

13   **Q. What investor-expected growth rate is appropriate in a DCF calculation?**

14   A.   Investors consider both company-specific variables and overall market sentiment (i.e.,

15   level of inflation rates, interest rates, economic conditions, etc.) when balancing their

16   capital gains expectations with their dividend yield requirements. Investors are not

17   influenced by a single set of company-specific variables weighted in a formulaic manner.

18   Therefore, in my opinion, an array of relevant growth rate indicators must be evaluated,

19   using a variety of techniques, when formulating a judgment of investor-expected growth.

20   **Q. What company-specific data have you considered in your growth rate analysis?**

21   A.   I considered the growth in the financial variables shown on Schedule 6 and Schedule 7.

22   The data provided on Schedule 6 show the historical growth rates in earnings per

18

1   share/unit, payouts per share/unit, book value per share/unit, and cash flow per share/unit

2   for the Electric Group. The historical growth rates were taken from the Value Line

3   publication that provides these data. As shown on Schedule 6, the historical earnings

4   growth rates were in a range of 3.60% to 5.23% for the Electric Group.

5   Schedule 7 provides projected earnings per share growth rates taken from analysts'

6   forecasts compiled by IBES/First Call, Zacks, Morningstar, SNL, and Value Line.

7   IBES/First Call, Zacks, Morningstar and SNL represent reliable authorities of projected

8   growth upon which investors rely. The IBES/First Call, Zacks and Morningstar forecasts

9   are limited to earnings per share growth, while Value Line makes projections of other

10   financial variables. The Value Line forecasts of dividends per share, book value per share,

11   and cash flow per share have also been included on Schedule 7 for the Electric Group.

12 Q.   **Is a five-year investment horizon associated with the analysts' forecasts consistent**

13   **with the DCF model?**

14 A.   Yes. In fact, it illustrates that the infinite form of the model contains an unrealistic

15   assumption. Rather than viewing the DCF in the context of an endless stream of growing

16   cash flows to the investor (e.g., a century of cash flows), the growth in the value of equity

17   investment (i.e., capital appreciation, or capital gains yield) is highly relevant to investors'

18   total return expectations. Hence, the sale price of a stock/unit can be viewed as a

19   liquidating payout that can be discounted along with the annual cash receipts during the

20   investment-holding period to arrive at the investor-expected return. The growth in the

21   price per share/unit will equal the growth in cash flow per share/unit to investors, absent

22   any change in the price-earnings ("P-E") multiple -- a necessary assumption of the DCF.

19

1   As such, my company-specific growth analysis, which focuses principally upon five-year

2   forecasts, conforms with the type of analysis that influences the total return expectation of

3   investors. Moreover, academic research focuses on five-year growth rates as they

4   influence stock prices. Indeed, if investors really required forecasts that extended beyond

5   five years in their valuation process, some investment advisory service would begin

6   publishing that information in order to meet the market created by the demands of

7   investors. The absence of such a publication signals that investors do not require infinite

8   forecasts in order to purchase and sell stocks in the marketplace.

9 Q. **What specific evidence have you considered in the DCF growth analysis?**

10 A. As to the five-year forecast growth rates, Schedule 7 indicates that the projected growth

11   rates for the Electric Group are 5.06% by IBES/First Call, 5.10% by Zacks, 5.43% by

12   Morningstar, 5.10% by SNL, and 4.70% by Value Line. The analysts' forecasts consider

13   all factors that cause a firm to grow. Such factors include growth from internal sources,

14   such as earnings that are retained and not paid out as distributions/dividends; external

15   sources, such as the use of borrowed capital or sale of new shares to finance new projects;

16   and acquisitions through business combinations.

17 Q. **What conclusion have you drawn from these data?**

18 A. As indicated earlier, with the constant price-earnings multiple assumption of the DCF

19   model, growth for these companies will occur at the higher projected growth rates, thus

20   producing the capital gains yield expected by investors. Although ideally historical and

21   projected data regarding growth in cash flows for the firm would be used to provide an

22   assessment of investor growth expectations, the circumstances of the Electric Group

20

1   mandate that the greater emphasis be placed upon projected growth data. Historical

2   evidence alone does not represent a complete measure of growth for these companies.

3   Rather, projections of future growth provide the principal focus of investor expectations.

4   In this regard, it is worthwhile to note that Professor Myron Gordon, the foremost

5   proponent of the DCF model in rate cases, established that the best measure of growth in

6   the DCF model is forecasts of earnings per share growth. Hence, to follow Professor

7   Gordon's findings, projections of growth, such as those published by IBES/First Call,

8   Zacks, Morningstar, SNL, and Value Line, represent a reasonable assessment of investor

9   expectations.

10   It is appropriate to consider all forecasts of earnings growth rates that are available

11   to investors. In this regard, I have considered the forecasts from IBES/First Call, Zacks,

12   Morningstar, SNL, and Value Line. The IBES/First Call, Zacks, Morningstar and SNL

13   growth rates are consensus forecasts taken from a survey of analysts that make projections

14   of growth for these companies. The IBES/First Call, Zacks and Morningstar estimates are

15   obtained from the Internet and are widely available to investors free-of-charge. First Call

16   probably is quoted most frequently in the financial press when reporting on earnings

17   forecasts. The Value Line forecasts also are widely available to investors and can be

18   obtained by subscription or free-of-charge at most public and collegiate libraries.

19   The forecasts of growth as shown on Schedule 7 provide a range of growth rates

20   for earnings growth of 4.70% to 5.43% for the Electric Group. While the DCF growth

21   rates cannot be established solely with a mathematical formulation, it is my opinion that an

22   investor-expected growth rate of 5.00% for the Electric Group is within the array of per

21

1   unit growth rates shown by the analysts' forecasts and the forecast growth in overall

2   enterprise profits.

3 Q. **What are your DCF results?**

4 A. As explained previously, I have utilized a six-month average cash yield ("D_1/P_0"),

5   adjusted in a forward-looking manner, for my DCF calculation. This dividend yield is

6   used in conjunction with the growth rate ("g") previously developed. The cost of equity

7   must also include an adjustment to cover flotation costs ("*flot.*"). Therefore, a flotation

8   costs adjustment must be applied to the DCF result (i.e., "k") that provides an additional

9   increment to the rate of return on equity (i.e., "K"). The factor used to develop the

10   modification that would account for the flotation costs adjustment is provided in Schedule

11   8.

12   Historical data concerning issuance and selling expenses (excluding market

13   pressure) is shown on Schedule 8. To adjust for the cost of raising new common equity

14   capital, the rate of return on common equity should recognize an appropriate multiple in

15   order to allow for flotation cost. This would provide recognition for flotation costs, which

16   are shown to be 3.3% for public offerings of common stocks by electric companies.

17   Because these costs are not recovered elsewhere, they must be recognized in the rate of

18   return. Since I apply the flotation cost to the entire cost of equity, I have only used a

19   modification factor of 1.02, which is applied to the DCF-measure of the cost of equity to

20   cover issuance expense. If the modification factor were applied to only a portion of the

21   cost of equity, such as just the dividend yield, then a higher factor would be necessary.

22   The resulting DCF cost rate is:

$$D_1/P_0 \ + \quad g \quad = \quad k \quad x \ flot. = \quad K$$

$$\text{Electric Group} \quad 4.04\% \ + \ 5.00\% \ = \ 9.04\% \ x \ 1.02 \ = \ 9.22\%$$

1   In developing the DCF return shown above, the growth rate is derived at least in part from

2   external capital because analysts incorporate the accretive benefit of issuing new shares in

3   their forecasts. This includes the earnings potential arising from additional equity capital,

4   as well as the impact of additional shares outstanding, and the value that accrues to

5   existing shareholders from issuing new shares at above book value. Growth attributed to

6   borrowed capital is likewise reflected in the analysts' forecasts.

7   As indicated by the DCF result shown above, the flotation cost adjustment adds

8   0.18% (9.22% - 9.04%) to the rate of return on common equity for the Electric Group.

9   The DCF result shown above represents the simplified (i.e., Gordon) form of the model

10   that contains a constant growth assumption. I should reiterate, however, that the DCF-

11   indicated cost rate provides an explanation of the rate of return on common stock market

12   prices without regard to the prospect of a change in the price-earnings multiple. An

13   assumption that there will be no change in the price-earnings multiple is not supported by

14   the realities of the equity market because price-earnings multiples do not remain constant.

15   **RISK PREMIUM ANALYSIS**

16   Q.   **Please describe your use of the Risk Premium approach to determine the cost of**

17   **equity.**

18   A.   With the Risk Premium approach, the cost of equity capital is determined by corporate

19   bond yields plus a premium to account for the fact that common equity is exposed to

                                        23

1   greater investment risk than debt capital. The result of my Risk Premium study is shown

2   on page 2 of Schedule 1. That result is 12.43% including the adjustment for flotation

3   costs. As with other models used to determine the cost of equity, the Risk Premium

4   approach has its limitations, including potential imprecision in the assessment of the future

5   cost of corporate debt and the measurement of the risk-adjusted common equity premium.

6 **Q.** **What long-term public utility debt cost rate did you use in your Risk Premium**

7   **analysis?**

8 A. In my opinion, a 5.25% yield represents a reasonable estimate of the prospective yield on

9   long-term A-rated public utility bonds.

10 **Q.** **What forecasts of interest rates have you considered in your analysis?**

11 A. I have determined the prospective yield on A-rated public utility debt by using the Blue

12   Chip Financial Forecasts ("Blue Chip") along with the spread in the yields that I describe

13   below. The Blue Chip is a reliable authority and contains consensus forecasts of a variety

14   of interest rates compiled from a panel of banking, brokerage, and investment advisory

15   services. In early 1999, Blue Chip stopped publishing forecasts of yields on A-rated

16   public utility bonds because the Federal Reserve deleted these yields from its Statistical

17   Release H.15. To independently project a forecast of the yields on A-rated public utility

18   bonds, I have combined the forecast yields on long-term Treasury bonds published on

19   August 1, 2013 by Blue Chip, and a yield spread of 1.25%, derived from historical data.

20 **Q.** **What historical data have you analyzed?**

21 A. I have analyzed the historical yields on the Moody's index of long-term public utility debt

22   as shown on page 1 of Schedule 9. For the twelve months ended July 2013, the average

1   monthly yield on Moody's index of A-rated public utility bonds was 4.14%. For the six

2   and three-month periods ended July 2013, the yields were 4.29% and 4.46%, respectively.

3   During the twelve-months ended July 2013, the range of the yields on A-rated public

4   utility bonds was 3.84% to 4.68%. Page 2 of Schedule 9 shows the long-run spread in

5   yields between A-rated public utility bonds and long-term Treasury bonds. As shown on

6   page 3 of Schedule 9, the yields on A-rated public utility bonds have exceeded those on

7   Treasury bonds by 1.46% on a twelve-month average basis, 1.42% on a six-month average

8   basis, and 1.42% on a the three-month average basis. From these averages, 1.25%

9   represents a reasonable spread for the yield on A-rated public utility bonds over Treasury

10   bonds.

11 Q.   **How have you used these data to project the yield on a-rated public utility bonds for**

12   **the purpose of your Risk Premium analyses?**

13 A.   Shown below is my calculation of the prospective yield on A-rated public utility bonds

14   using the building blocks discussed above, i.e., the Blue Chip forecast of Treasury bond

15   yields and the public utility bond yield spread. For comparative purposes, I also have

16   shown the Blue Chip forecasts of Aaa-rated and Baa-rated corporate bonds. These

17   forecasts are:

		Blue Chip Financial Forecasts				
		Corporate		30-Year	A-rated Public Utility	
Year	Quarter	Aaa-rated	Baa-rated	Treasury	Spread	Yield
2013	Third	4.3%	5.3%	3.6%	1.25%	4.85%
2013	Fourth	4.4%	5.3%	3.7%	1.25%	4.95%
2014	First	4.5%	5.4%	3.8%	1.25%	5.05%
2014	Second	4.6%	5.5%	3.9%	1.25%	5.15%
2014	Third	4.7%	5.6%	4.0%	1.25%	5.25%
2014	Fourth	4.8%	5.7%	4.1%	1.25%	5.35%

1   Q.   **Are there additional forecasts of interest rates that extend beyond those shown**

2   **above?**

3   A.   Yes. Twice yearly, <u>Blue Chip</u> provides long-term forecasts of interest rates. In its June 1,

4   2013 publication, <u>Blue Chip</u> published longer-term forecasts of interest rates, which were

5   reported to be:

	Blue Chip Financial Forecasts		
	30-Year	Corporate	
Averages	Treasury	Aaa-rated	Baa-rated
2015-19	5.2%	5.8%	6.9%
2020-24	5.6%	6.3%	7.4%

6   Given these forecasted interest rates, a 5.25% yield on A-rated public utility bonds

7   represents a reasonable expectation.

8   Q.   **What equity risk premium have you determined for this case?**

9   A.   To develop an appropriate equity risk premium, I analyzed the results from the 2013

10   Classic Yearbook for <u>Stocks, Bonds, Bills and Inflation</u> ("SBBI") published by Ibbotson

11   Associates that is part of Morningstar. My investigation reveals that the equity risk

12   premium varies according to the level of interest rates. That is to say, the equity risk

13   premium increases as interest rates decline and it declines as interest rates increase. This

14   inverse relationship is revealed by the summary data presented below and shown on page

15   1 of Schedule 10.

DIRECT TESTIMONY OF PAUL R. MOUL

Common Equity Risk Premiums	
Low Interest Rates	7.00%
Average Across All Interest Rates	5.41%
High Interest Rates	3.77%

1   Based on my analysis of the historical data, the equity risk premium was 7.00% when the

2   marginal cost of long-term government bonds was low (i.e., 3.03%, which was the average

3   yield during periods of low rates). Conversely, when the yield on long-term government

4   bonds was high (i.e., 7.35% on average during periods of high interest rates) the spread

5   narrowed to 3.77%. Over the entire spectrum of interest rates, the equity risk premium

6   was 5.41% when the average government bond yield was 5.16%. With the current low

7   interest rates, an equity risk premium of 7.00% is indicated today.

8 Q. **What common equity cost rate would be appropriate using this equity risk premium**

9   **and the yield on long-term public utility debt?**

10 A. The cost of equity (i.e., "k") is represented by the sum of the prospective yield for long-

11   term public utility debt (i.e., "i") and the equity risk premium (i.e., "RP"). To that cost

12   must be added an adjustment for common stock financing costs ("*flot.*"). The Risk

13   Premium approach provides a cost of equity that is summarized on Schedule 1.

$$i \quad + \quad RP \quad = \quad k \quad + \quad flot. \quad = \quad K$$

Risk Premium Approach 5.25% + 7.00% = 12.25% + 0.18% = 12.43%

14   <u>**CAPITAL ASSET PRICING MODEL**</u>

15 Q. **How have you used the Capital Asset Pricing Model to measure the cost of equity in**

16   **this case?**

27

1   A.   The CAPM uses the yield on a risk-free interest bearing obligation plus a rate of return

2   premium that is proportional to the systematic risk of an investment. As shown on

3   Schedule 1, the result of the CAPM is 9.65% including flotation costs. To compute the

4   cost of equity with the CAPM, three components are necessary: a risk-free rate of return

5   ("Rf"), the beta measure of systematic risk ("β"), and the market risk premium ("Rm-Rf")

6   derived from the total return on the market of equities reduced by the risk-free rate of

7   return. The CAPM specifically accounts for differences in systematic risk (i.e., market

8   risk as measured by the beta) between an individual firm or group of firms and the entire

9   market of equities.

10   **Q.**   **What betas have you considered in the CAPM?**

11   A.   For my CAPM analysis, I considered the <u>Value Line</u> betas. As shown on page 2 of

12   Schedule 3, the average beta is 0.69 for the Electric Group.

13   **Q.**   **What risk-free rate have you used in the CAPM?**

14   A.   As shown on page 1 of Schedule 11, I provided the historical yields on Treasury notes and

15   bonds. For the twelve months ended July 2013, the average yield on 30-year Treasury

16   bonds was 3.06%. For the six- and three-months ended July 2013, the yields on 30-year

17   Treasury bonds were 3.23% and 3.37%, respectively. During the twelve-months ended

18   July 2013, the range of the yields on 30-year Treasury bonds was 2.77% to 3.61%. The

19   recent low yields on Treasury bonds can be traced to events that have occurred during the

20   past several years that included the financial crisis and its aftermath. The resulting decline

21   in the yields on Treasury obligations can be attributed to a number of factors, including:

22   the sovereign debt crisis in the euro zone, concern over a possible double dip recession,

1   the potential for deflation, and the Federal Reserve's large balance sheet that has been

2   expanded through the purchase of Treasury obligations and mortgage-backed securities

3   (also known as QEI, QEII, and QEIII), and the reinvestment of the proceeds from

4   maturing obligations and the lengthening of the maturity of the Fed's bond portfolio

5   through the sale of short-term Treasuries and the purchase of long-term Treasury

6   obligations (also known as "operation twist"). Essentially, low interest rates are the

7   product of the policy of the FOMC in its attempt to deal with stagnant job growth, which

8   is part of its dual mandate. As shown on page 2 of Schedule 11, forecasts published by

9   Blue Chip on August 1, 2013 indicate that the yields on long-term Treasury bonds are

10   expected to be in the range of 3.6% to 4.1% during the next six quarters. The longer term

11   forecasts described previously show that the yields on 30-year Treasury bonds will

12   average 5.2% from 2015 through 2019 and 5.6% from 2020 to 2024. For the reasons

13   explained previously, forecasts of interest rates should be emphasized at this time in

14   selecting the risk-free rate of return in CAPM. Hence, I have used a 4.00% risk-free rate

15   of return for CAPM purposes, which considers not only the Blue Chip forecasts, but also

16   the recent trend in the yields on long-term Treasury bonds.

17 **Q.** **What market premium have you used in the CAPM?**

18 A. As shown in the lower panel of data presented on page 2 of Schedule 11, the market

19   premium is derived from historical data and the Value Line and S&P 500 returns. For the

20   historically based market premium, I have used the arithmetic mean obtained from the data

21   presented on page 1 of Schedule 10. On that schedule, the market return on large stocks

22   during periods of low interest rates was 11.72%. During that time, the yield on long-term

1   government bonds was 3.03%. The resulting market premium is 8.69% (11.72% - 3.03%)

2   based on historical data. For the forecast returns, I calculated a 10.88% total market return

3   from the <u>Value Line</u> data and a DCF return of 11.46% for the S&P 500. With the average

4   forecast return of 11.17% (10.88% + 11.46% = 22.34% ÷ 2), I calculated a market

5   premium of 7.17% (11.17% - 4.00%) using forecast data. The market premium applicable

6   to the CAPM derived from these sources equals 7.93% (7.17% + 8.69% = 15.86% ÷ 2).

7   **Q.**   **What result have you determined using the CAPM?**

8   A.   Using the 4.00% risk-free rate of return, the beta of .69 for the Electric Group, the 7.93%

9   market premium, and the flotation cost adjustment developed previously, the following

10   result is indicated.

$$Rf \quad + \quad \beta \quad x \ (\quad Rm\text{-}Rf \quad) \quad = \quad k \quad + \quad flot \quad = \quad K$$

Electric Group   4.00% + 0.69 x (7.93%   )   = 9.47% + 0.18% =   9.65%

11   <div align="center"><u>**COMPARABLE EARNINGS APPROACH**</u></div>

12   **Q.**   **How have you applied the Comparable Earnings approach in this case?**

13   A.   The Comparable Earnings approach determines the equity return based upon results from

14   non-regulated companies. It is the oldest of all rate of return methods, having been around

15   for about one-century. Because regulation is a substitute for competitively determined

16   prices, the returns realized by non-regulated firms with comparable risks to a public utility

17   provide useful insight into a fair rate of return. In order to identify the appropriate return,

18   it is necessary to analyze returns earned (or realized) by other firms within the context of

19   the Comparable Earnings standard. The firms selected for the Comparable Earnings

<div align="center">30</div>

1   approach should be companies whose prices are not subject to cost-based price ceilings

2   (i.e., non-regulated firms) so that circularity is avoided.

3   There are two avenues available to implement the Comparable Earnings approach.

4   One method involves the selection of another industry (or industries) with comparable

5   risks to the public utility in question, and the results for all companies within that industry

6   serve as a benchmark. The second approach requires the selection of parameters that

7   represent similar risk traits for the public utility and the comparable risk companies.

8   Using this approach, the business lines of the comparable companies become unimportant.

9   The latter approach is preferable with the further qualification that the comparable risk

10   companies exclude regulated firms in order to avoid the circular reasoning implicit in the

11   use of the achieved earnings/book ratios of other regulated firms. The United States

12   Supreme Court has held that:

13   A public utility is entitled to such rates as will permit it to earn a
14   return on the value of the property which it employs for the
15   convenience of the public equal to that generally being made at the
16   same time and in the same general part of the country on
17   investments in other business undertakings which are attended by
18   corresponding risks and uncertainties.... The return should be
19   reasonably sufficient to assure confidence in the financial
20   soundness of the utility and should be adequate, under efficient and
21   economical management, to maintain and support its credit and
22   enable it to raise the money necessary for the proper discharge of
23   its public duties.   Bluefield Water Works vs. Public Service
24   Commission, 262 U.S. 668 (1923).
25

26   Therefore, it is important to identify the returns earned by firms that compete for capital

27   with a public utility. This can be accomplished by analyzing the returns of non-regulated

28   firms that are subject to the competitive forces of the marketplace.

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DIRECT TESTIMONY OF PAUL R. MOUL

1   **Q.**   **How have you implemented the Comparable Earnings approach?**

2   **A.**   In order to implement the Comparable Earnings approach, non-regulated companies were

3   selected from The Value Line Investment Survey for Windows that have six categories of

4   comparability designed to reflect the risk of the Electric Group. These screening criteria

5   were based upon the range as defined by the rankings of the companies in the Electric

6   Group. The items considered were: Timeliness Rank, Safety Rank, Financial Strength,

7   Price Stability, Value Line betas, and Technical Rank. The identities of the companies

8   comprising the Comparable Earnings group and their associated rankings within the

9   ranges are identified on page 1 of Schedule 12.

10   Value Line data was relied upon because it provides a comprehensive basis for

11   evaluating the risks of the comparable firms. As to the returns calculated by Value Line

12   for these companies, there is some downward bias in the figures shown on page 2 of

13   Schedule 12, because Value Line computes the returns on year-end rather than average

14   book value. If average book values had been employed, the rates of return would have

15   been slightly higher. Nevertheless, these are the returns considered by investors when

16   taking positions in these stocks. Because many of the comparability factors, as well as the

17   published returns, are used by investors in selecting stocks, and the fact that investors rely

18   on the Value Line service to gauge returns, it is, therefore, an appropriate database for

19   measuring comparable return opportunities.

20   **Q.**   **What data have you used in your Comparable Earnings analysis?**

21   **A.**   I have used both historical realized returns and forecasted returns for non-utility

22   companies. As noted previously, I have not used returns for utility companies in order to

1   avoid the circularity that arises from using regulatory-influenced returns to determine a

2   regulated return. It is appropriate to consider a relatively long measurement period in the

3   Comparable Earnings approach in order to cover conditions over an entire business cycle.

4   A ten-year period (five historical years and five projected years) is sufficient to cover an

5   average business cycle. Unlike the DCF and CAPM, the results of the Comparable

6   Earnings method can be applied directly to the book value capitalization. In other words,

7   the Comparable Earnings approach does not contain the potential misspecification

8   contained in market models when the market capitalization and book value capitalization

9   diverge significantly. The historical rate of return on book common equity was 14.3%

10 using only the returns that were less than 20% and greater than 8% as shown on page 2 of

11 Schedule 12. Points of demarcation were chosen to eliminate the results of highly

12 profitable enterprises, which the Bluefield case stated were not the type of returns that a

13 utility was entitled to earn. For this purpose, I used 20% as the point where those returns

14 could be viewed as highly profitable and should be excluded from the Comparable

15 Earnings approach. And to minimize the effect of a skewed distribution, I removed from

16 the average the returns that were less than 8%. The forecast rates of return as published by

17 Value Line are shown by the 14.2% using the same parameters, as provided on page 2 of

18 Schedule 12. Using these data, my Comparable Earnings result is 14.25%, as shown on

19 Schedule 1.

1   <u>CONCLUSION</u>

2 **Q. What is your conclusion concerning the cost of equity for the Electric Group?**

3 A. Based upon the application of a variety of methods and models described previously, it is

4   my opinion that the cost of equity is 11.39% for the Electric Group. It is essential that the

5   Commission employ a variety of techniques to measure the Company's cost of equity

6   because of the limitations and infirmities that are inherent in each method. Indeed, my

7   studies indicate that the cost of equity for the Electric Group is 11.39% (9.22% + 12.43%

8   + 9.65% + 14.25% = 45.55% ÷ 4) and is represented by the average of each of the

9   methods/models that I previously discussed.

10 **Q. Are adjustments to the Electric Group's results necessary to arrive at a cost of equity**

11   **for Lockhart?**

12 A. Yes. I made two adjustments in this regard.

13 **Q. How is the 11.39% cost of equity for the Electric Group adjusted for Lockhart's**

14   **100% common equity?**

15 A. In pioneering work, Nobel laureates Modigliani and Miller developed several theories

16   about the role of leverage in a firm's capital structure. As part of that work, Modigliani

17   and Miller established that as the borrowing of a firm increases, the expected return on

18   stockholders' equity also increases.[7] Likewise, the return on equity decreases when the

19   financial leverage of a firm decreases. This principle is incorporated into the adjustment

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[7] Modigliani, F. and Miller, M.H. "The Cost of Capital, Corporation Finance, and the Theory of Investments." American Economic Review, June 1958, 261-297.

Modigliani, F. and Miller, M. H. "Taxes and the Cost of Capital: A Correction." American Economic Review, June 1963, 433-443.

34

1   to the cost of equity for the Electric Group, and recognizes that the expected return on

2   equity decreases when it is to be applied to 100% common equity.

3 Q. **How can the Modigliani and Miller theory be applied to calculate the rate of return**

4   **on common equity with 100% common equity?**

5 A. First it is necessary to calculate the capital structure ratios for the Electric Group based

6   upon the market value of their capitalization. By taking the "Fair Value of Financial

7   Instruments" (Disclosures about Fair Value of Financial Instruments -- Statement of

8   Financial Accounting Standards ("FAS") No. 107) shown in the annual report for these

9   companies and the market value of the common equity using the price of stock, the capital

10   structure ratios calculated from the market value of their securities are:

Electric Group	Capitalization at Market Value (Fair Value)
Long-term Debt	46.86%
Preferred Stock	0.32
Common Equity	52.82
Total	100.00%

20   Those results are shown on Schedule 13. With the capital ratios calculated above,

21   the cost of equity for a firm without any leverage can be calculated. The cost of equity for

22   an unleveraged firm using the capital structure ratios calculated with market values is:

23   $ku = ke - (((ku - i)\ 1\text{-}t)\ D\ /\ E) - (ku - d)\ P\ /\ E$

24   $8.69\% = 11.39\% - (((8.69\%-4.06\%)\ .65)\ 46.86\% / 52.82\%) - (8.69\% - 5.68\%)\ 0.32\%/52.82\%$

1   where ku = cost of equity for an all-equity firm, ke = market determined cost equity, i =

2   cost of debt[8], d = dividend rate on preferred stock [9], D = debt ratio, P = preferred stock

3   ratio, and E = common equity ratio. The formula shown above indicates that the cost of

4   equity for a firm with 100% equity is 8.69% using the market value of the Electric

5   Group's capitalization.

6   Q.   **After adjustment for 100% common equity, would a 8.69% rate of return on**

7   **common equity be adequate for Lockhart?**

8   A.   No. As the size of a firm decreases, its risk, and hence its required return increases. In his

9   discussion of the cost of capital, Professor Brigham has indicated that smaller firms have

10   higher capital costs than otherwise similar larger firms (see Fundamentals of Financial

11   Management, fifth edition, page 623). Also, the Fama/French study (see "The Cross-

12   Section of Expected Stock Returns"; The Journal of Finance, June 1992) established that

13   the size of a firm helps explain stock returns. In an October 15, 1995 article in Public

14   Utility Fortnightly, entitled Equity and the Small-Stock Effect, by Michael Annin, it was

15   demonstrated that the CAPM would understate the cost of equity significantly according to

16   a company's size.

17   Q.   **How should the very small size of Lockhart be recognized in its equity return?**

18   A.   The 2013 SBBI Yearbook provides size premiums for mid-cap, low-cap, and micro-cap

19   portfolios based upon returns in excess of the CAPM. The Electric Group has an average

20   market capitalization of its equity of $18.107 billion, which would place it in the first

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[8]   The cost of debt is the average yield on Moody's A rated public utility bonds.

[9]   The cost of preferred is the average yield on Moody's "a" rated preferred stock.

1   decile according to the size of the companies traded on the NYSE, AMEX and NASDAQ.

2   Therefore, the Electric Group represents a large-cap portfolio. Lockhart, however, has

3   only $41 million of common equity which would place it in the smallest (i.e., the tenth)

4   decile according to the 2013 SBBI Yearbook.

5   According to the 2013 SBBI Yearbook (see Schedule 14), the respective size

6   premiums are 1.12% for mid-cap companies, 1.85% for low-cap companies, and 3.81%

7   for micro-cap companies. The Company qualifies for the highest size adjustment

8   attributed to companies in the micro-cap group, which provides a 3.81% size premium.

9   But to be conservative, I have assigned just 75% weight to the micro-cap adjustment and

10   have assigned 25% weight to the low-cap adjustment of 1.85%. The resulting weighted

11   average size adjustment is 3.32% ((3.81% x .75) + (1.85% x .25)) that I have reflected on

12   Schedule 1.

13 **Q.**   **Please summarize your recommendation concerning the appropriate rate of return**

14   **on common equity for the Company.**

15 **A.**   Given the Company's risk traits enumerated earlier, its 100% common equity ratio, and its

16   extremely small size, a 12.00% rate of return on common equity is reasonable for Lockhart

17   as shown on Schedule 1. As Mr. Stone's testimony describes, the Company has taken a

18   variety of initiatives to provide its customers with reasonably priced energy that is less

19   dependent upon purchases from Duke. The Company has done so through reinvestment in

20   its business and by not paying a dividend to its Parent. The Commission should recognize

21   these initiatives when it considers the rate of return that should be granted in this

22   proceeding.

1   **Q.**   **Does this conclude your prepared direct testimony?**

2   A.   Yes.

EDUCATIONAL BACKGROUND, BUSINESS EXPERIENCE AND QUALIFICATIONS

1
2

3   I was awarded a degree of Bachelor of Science in Business Administration by Drexel

4   University in 1971. While at Drexel, I participated in the Cooperative Education Program

5   which included employment, for one year, with American Water Works Service Company,

6   Inc., as an internal auditor, where I was involved in the audits of several operating water

7   companies of the American Water Works System and participated in the preparation of

8   annual reports to regulatory agencies and assisted in other general accounting matters.

9   Upon graduation from Drexel University, I was employed by American Water

10 Works Service Company, Inc., in the Eastern Regional Treasury Department where my

11 duties included preparation of rate case exhibits for submission to regulatory agencies, as

12 well as responsibility for various treasury functions of the thirteen New England operating

13 subsidiaries.

14 In 1973, I joined the Municipal Financial Services Department of Betz

15 Environmental Engineers, a consulting engineering firm, where I specialized in financial

16 studies for municipal water and wastewater systems.

17 In 1974, I joined Associated Utility Services, Inc., now known as AUS Consultants.

18 I held various positions with the Utility Services Group of AUS Consultants, concluding my

19 employment there as a Senior Vice President.

20 In 1994, I formed P. Moul & Associates, an independent financial and regulatory

21 consulting firm. In my capacity as Managing Consultant and for the past twenty-nine years,

22 I have continuously studied the rate of return requirements for cost of service-regulated

23 firms. In this regard, I have supervised the preparation of rate of return studies, which were

24 employed, in connection with my testimony and in the past for other individuals. I have

1 presented direct testimony on the subject of fair rate of return, evaluated rate of return

2 testimony of other witnesses, and presented rebuttal testimony.

3   My studies and prepared direct testimony have been presented before thirty-seven

4 (37) federal, state and municipal regulatory commissions, consisting of: the Federal Energy

5 Regulatory Commission; state public utility commissions in Alabama, Alaska, California,

6 Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa,

7 Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri,

8 New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania,

9 Rhode Island, South Carolina, Tennessee, Texas, Virginia, West Virginia, Wisconsin, and

10 the Philadelphia Gas Commission, and the Texas Commission on Environmental Quality.

11 My testimony has been offered in over 200 rate cases involving electric power, natural gas

12 distribution and transmission, resource recovery, solid waste collection and disposal,

13 telephone, wastewater, and water service utility companies. While my testimony has

14 involved principally fair rate of return and financial matters, I have also testified on capital

15 allocations, capital recovery, cash working capital, income taxes, factoring of accounts

16 receivable, and take-or-pay expense recovery. My testimony has been offered on behalf of

17 municipal and investor-owned public utilities and for the staff of a regulatory commission. I

18 have also testified at an Executive Session of the State of New Jersey Commission of

19 Investigation concerning the BPU regulation of solid waste collection and disposal.

20   I was a co-author of a verified statement submitted to the Interstate Commerce

21 Commission concerning the 1983 Railroad Cost of Capital (Ex Parte No. 452). I was also

22 co-author of comments submitted to the Federal Energy Regulatory Commission regarding

23 the Generic Determination of Rate of Return on Common Equity for Public Utilities in

1   1985, 1986 and 1987 (Docket Nos. RM85-19-000, RM86-12-000, RM87-35-000 and

2   RM88-25-000). Further, I have been the consultant to the New York Chapter of the

3   National Association of Water Companies, which represented the water utility group in the

4   Proceeding on Motion of the Commission to Consider Financial Regulatory Policies for

5   New York Utilities (Case 91-M-0509). I have also submitted comments to the Federal

6   Energy Regulatory Commission in its Notice of Proposed Rulemaking (Docket No. RM99-

7   2-000) concerning Regional Transmission Organizations and on behalf of the Edison

8   Electric Institute in its intervention in the case of Southern California Edison Company

9   (Docket No. ER97-2355-000). Also, I was a member of the panel of participants at the

10   Technical Conference in Docket No. PL07-2 on the Composition of Proxy Groups for

11   Determining Gas and Oil Pipeline Return on Equity.

12   In late 1978, I arranged for the private placement of bonds on behalf of an investor-

13   owned public utility. I have assisted in the preparation of a report to the Delaware Public

14   Service Commission relative to the operations of the Lincoln and Ellendale Electric

15   Company. I was also engaged by the Delaware P.S.C. to review and report on the proposed

16   financing and disposition of certain assets of Sussex Shores Water Company (P.S.C. Docket

17   Nos. 24-79 and 47-79). I was a co-author of a Report on Proposed Mandatory Solid Waste

18   Collection Ordinance prepared for the Board of County Commissioners of Collier County,

19   Florida.

20   I have been a consultant to the Bucks County Water and Sewer Authority concerning

21   rates and charges for wholesale contract service with the City of Philadelphia. My

22   municipal consulting experience also included an assignment for Baltimore County,

1   Maryland, regarding the City/County Water Agreement for Metropolitan District customers

2   (Circuit Court for Baltimore County in Case 34/153/87-CSP-2636).

3

LOCKHART POWER COMPANY

Docket No. 2013-378-E

Exhibit to Accompany
the Direct Testimony

of

Paul R. Moul
Managing Consultant
P. Moul & Associates

Concerning

Cost of Equity

Lockhart Power Company

Index of Schedules

Lockhart Power Company
Cost of Equity
as of July 31 2012

Discounted Cash Flow (DCF)	D_1/P_0 [1] +	g [2]	=	k	x	flot. [3]	=	K
Electric Group	4.04% +	5.00%	=	9.04%	x	1.02	=	9.22%

Risk Premium (RP)	I [4] +	RP [5]	=	k	+	flot.	=	K
Electric Group	5.25% +	7.00%	=	12.25%	+	0.18%	=	12.43%

Capital Asset Pricing Model (CAPM)	Rf [6] +	β [7]	x ($Rm\text{-}Rf$ [8]) =	k	+	flot.	=	K
Electric Group	4.00% +	0.69	x (7.93%) =	9.47%	+	0.18%	=	9.65%

Comparable Earnings (CE)	Historical [9]	Forecast [9]	Average
Comparable Earnings Group	14.3%	14.2%	14.25%

Proposed Rate of Return

	Low-Cap	Micro-Cap	
Average all methods/models			11.39%
Leverage Adjustment for 100% Equity [10]			-2.70%
Small Size Adjustment [11] (75% weight micro-cap & 25% weight low-cap)	1.85%	3.81%	3.32%

Cost of Equity for Lockhart (rounded) 12.00%

References
[1] Schedule 05 page 1
[2] Schedule 07 page 1
[3] Schedule 08 page 1
[4] A-rated public utility bond yield comprised of a 4.00% risk-free rate of return (Schedule 11 page 2) and a yield spread of 1.25% (Schedule 09
[5] Schedule 10 page 1
[6] Schedule 11 page 2
[7] Schedule 03 page 2
[8] Schedule 11 page 2
[9] Schedule 12 page 2
[10] Schedule 13 page 1
[11] Schedule 14 page 1

Lockhart Power Company
Capitalization and Financial Statistics
2008-2012, Inclusive

	2012	2011	2010	2009	2008	
			(Millions of Dollars)			
Amount of Capital Employed						
Permanent Capital	$ 40.9	$ 33.0	$ 30.0	$ 26.7	$ 24.3	
Short-Term Debt	$ -	$ 5.0	$ -	$ -	$ -	
Total Capital	$ 40.9	$ 38.0	$ 30.0	$ 26.7	$ 24.3	
						Average
Dividend Payout Ratio	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Capital Structure Ratios						
Based on Permanent Captial:						
Common Equity	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Based on Total Capital:						
Total Debt Incl. Short Term	0.0%	13.1%	0.0%	0.0%	0.0%	2.6%
Common Equity	100.0%	86.9%	100.0%	100.0%	100.0%	97.4%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Rate of Return on Book Common Equity	7.9%	9.8%	11.4%	9.4%	10.8%	9.9%
Operating Ratio [1]	86.2%	86.4%	80.3%	85.3%	84.9%	84.6%
Quality of Earnings & Cash Flow						
Effective Income Tax Rate	35.7%	22.4%	36.9%	36.4%	37.2%	33.7%
Internal Cash Generation/Construction [2]	75.7%	37.0%	112.4%	169.9%	200.0%	119.0%

See Page 2 for Notes.

Lockhart Power Company
Capitalization and Financial Statistics
2008-2012, Inclusive

Notes:

(1)   Total operating expenses, maintenance, depreciation and taxes other than income as a
        percentage of operating revenues.

(2)   Internal cash generation/gross construction is the percentage of gross construction expenditures
        provided by internally generated funds from operations after payment of all cash dividends.

Source of Information: Audited Financial Statements

Electric Group
Capitalization and Financial Statistics [1]
2008-2012, Inclusive

	2012	2011	2010	2009	2008	
			(Millions of Dollars)			
Amount of Capital Employed						
Permanent Capital	$ 26,267.6	$ 21,883.7	$ 20,615.4	$ 19,820.8	$ 18,250.0	
Short-Term Debt	$ 793.1	$ 629.7	$ 532.0	$ 430.0	$ 731.5	
Total Capital	$ 27,060.7	$ 22,513.4	$ 21,147.4	$ 20,250.8	$ 18,981.5	
Market-Based Financial Ratios						Average
Price-Earnings Multiple	16 x	13 x	12 x	13 x	14 x	14 x
Market/Book Ratio	176.9%	167.5%	155.2%	146.8%	175.8%	164.4%
Dividend Yield	4.1%	4.4%	4.8%	5.2%	4.5%	4.6%
Dividend Payout Ratio	68.3%	57.7%	59.0%	66.8%	63.2%	63.0%
Capital Structure Ratios						
Based on Permanent Captial:						
Long-Term Debt	55.4%	55.0%	55.7%	57.3%	57.7%	56.2%
Preferred Stock	0.9%	0.9%	0.7%	0.6%	0.7%	0.8%
Common Equity [2]	43.7%	44.2%	43.5%	42.1%	41.5%	43.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Based on Total Capital:						
Total Debt incl. Short Term	56.7%	56.2%	56.9%	58.2%	59.1%	57.4%
Preferred Stock	0.9%	0.9%	0.7%	0.6%	0.7%	0.7%
Common Equity [2]	42.4%	43.0%	42.4%	41.3%	40.2%	41.8%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Rate of Return on Book Common Equity [2]	9.6%	12.8%	13.7%	11.4%	13.1%	12.1%
Operating Ratio [3]	78.5%	79.7%	79.9%	82.2%	84.2%	80.9%
Coverage incl. AFUDC [4]						
Pre-tax: All Interest Charges	3.11 x	3.72 x	3.75 x	3.05 x	3.24 x	3.37 x
Post-tax: All Interest Charges	2.48 x	2.87 x	2.78 x	2.43 x	2.55 x	2.62 x
Overall Coverage: All Int. & Pfd. Div.	2.44 x	2.84 x	2.75 x	2.40 x	2.51 x	2.59 x
Coverage excl. AFUDC [4]						
Pre-tax: All Interest Charges	3.01 x	3.61 x	3.65 x	2.83 x	3.06 x	3.23 x
Post-tax: All Interest Charges	2.38 x	2.76 x	2.68 x	2.21 x	2.37 x	2.48 x
Overall Coverage: All Int. & Pfd. Div.	2.35 x	2.73 x	2.65 x	2.18 x	2.33 x	2.45 x
Quality of Earnings & Cash Flow						
AFC/Income Avail. for Common Equity	7.0%	5.9%	6.6%	15.5%	12.3%	9.5%
Effective Income Tax Rate	29.6%	31.0%	34.8%	29.5%	30.9%	31.2%
Internal Cash Generation/Construction [5]	81.5%	88.7%	89.6%	81.3%	70.3%	82.3%
Gross Cash Flow/ Avg. Total Debt [6]	21.3%	21.9%	22.1%	20.8%	20.7%	21.4%
Gross Cash Flow Interest Coverage [7]	5.88 x	5.19 x	4.86 x	4.70 x	4.43 x	5.01 x
Common Dividend Coverage [8]	4.15 x	4.23 x	4.37 x	4.25 x	4.09 x	4.22 x

See Page 2 for Notes.

Electric Group
Capitalization and Financial Statistics
2008-2012, Inclusive

Notes:

(1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group.
(2) Excluding Accumulated Other Comprehensive Income ("OCI") from the equity account.
(3) Total operating expenses, maintenance, depreciation and taxes other than income taxes as a percent of operating revenues.
(4) Coverage calculations represent the number of times available earnings, both including and excluding AFUDC (allowance for funds used during construction) as reported in its entirety, cover fixed charges.
(5) Internal cash generation/gross construction is the percentage of gross construction expenditures provided by internally-generated funds from operations after payment of all cash dividends divided by gross construction expenditures.
(6) Gross Cash Flow (sum of net income, depreciation, amortization, net deferred income taxes and investment tax credits, less total AFUDC) plus interest charges, divided by interest charges.
(7) Gross Cash Flow plus interest charges divided by interest charges.
(8) Common dividend coverage is the relationship of internally-generated funds from operations after payment of preferred stock dividends to common dividends paid.

Basis of Selection:
The Electric Group includes companies reported in the basic service of The Value Line Investment Survey, within the group "Electric Utility Industry," their stock is traded on the New York Stock Exchange, they operate within the southeastern and south central regions as defined by the Federal Energy Regulatory Commission's Bureau of Power, and they are not currently the target of a merger or acquisition.

		Corporate Credit Ratings		Stock	S&P Stock	Value Line
Ticker	Company	Moody's	S&P	Traded	Ranking	Beta
AEP	American Electric Power	Baa1	BBB	NYSE	B	0.65
CNP	CenterPoint Energy	Baa1	A-	NYSE	B	0.80
CNL	Cleco Corp.	Baa2	BBB+	NYSE	B	0.65
D	Dominion Resources, Inc.	A3	A-	NYSE	B+	0.65
DUK	Duke Energy Corp.	A3	BBB+	NYSE	B	0.60
ETR	Entergy Corp.	Baa2	BBB	NYSE	A	0.70
NEE	NextEra Energy, Inc.	A2	A-	NYSE	A	0.70
OGE	OGE Energy Corp.	A2	A-	NYSE	A-	0.75
SCG	SCANA Corp.	Baa2	BBB+	NYSE	A-	0.65
SO	Southern Company	A3	A	NYSE	A-	0.55
TE	TECO Energy, Inc.	A3	BBB+	NYSE	B	0.85
	Average	Baa1	BBB+		B+	0.69

Note: Ratings are those of utility subsidiaries

Source of Information: Utility COMPUSTAT
Moody's Investors Service
Standard & Poor's Corporation
S&P Stock Guide

Standard & Poor's Public Utilities
Capitalization and Financial Statistics [1]
2008-2012, Inclusive

	2012	2011	2010	2009	2008	
			(Millions of Dollars)			
Amount of Capital Employed						
Permanent Capital	$ 21,620.0	$ 18,840.8	$ 17,587.3	$ 16,618.6	$ 15,620.1	
Short-Term Debt	$ 648.9	$ 531.4	$ 435.4	$ 415.0	$ 803.5	
Total Capital	$ 22,268.9	$ 19,372.2	$ 18,022.7	$ 17,033.6	$ 16,423.6	
						Average
Market-Based Financial Ratios						
Price-Earnings Multiple	18 x	15 x	15 x	14 x	14 x	15 x
Market/Book Ratio	164.0%	155.2%	142.8%	137.1%	174.9%	154.8%
Dividend Yield	4.1%	4.4%	4.8%	5.2%	4.3%	4.6%
Dividend Payout Ratio	70.3%	64.7%	72.0%	72.2%	61.9%	68.2%
Capital Structure Ratios						
Based on Permanent Captial:						
Long-Term Debt	52.9%	52.9%	53.4%	54.2%	54.3%	53.5%
Preferred Stock	1.6%	1.3%	1.3%	1.5%	1.7%	1.5%
Common Equity [2]	45.5%	45.8%	45.3%	44.3%	44.0%	45.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Based on Total Capital:						
Total Debt incl. Short Term	54.5%	54.5%	54.7%	55.6%	57.1%	55.3%
Preferred Stock	1.6%	1.3%	1.3%	1.4%	1.6%	1.4%
Common Equity [2]	44.0%	44.3%	44.0%	43.0%	41.3%	43.3%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Rate of Return on Book Common Equity [2]	9.2%	10.5%	10.8%	10.1%	12.2%	10.6%
Operating Ratio [3]	81.3%	81.4%	81.6%	83.0%	84.1%	82.3%
Coverage incl. AFUDC [4]						
Pre-tax: All Interest Charges	2.94 x	3.35 x	3.34 x	3.06 x	3.39 x	3.22 x
Post-tax: All Interest Charges	2.35 x	2.59 x	2.52 x	2.36 x	2.57 x	2.48 x
Overall Coverage: All Int. & Pfd. Div.	2.32 x	2.57 x	2.50 x	2.33 x	2.53 x	2.45 x
Coverage excl. AFUDC [4]						
Pre-tax: All Interest Charges	2.85 x	3.25 x	3.25 x	2.96 x	3.28 x	3.12 x
Post-tax: All Interest Charges	2.25 x	2.49 x	2.43 x	2.26 x	2.46 x	2.38 x
Overall Coverage: All Int. & Pfd. Div.	2.22 x	2.47 x	2.41 x	2.22 x	2.42 x	2.35 x
Quality of Earnings & Cash Flow						
AFC/Income Avail. for Common Equity	7.1%	5.7%	6.6%	7.8%	7.7%	7.0%
Effective Income Tax Rate	26.2%	36.8%	34.3%	31.8%	33.8%	32.6%
Internal Cash Generation/Construction [5]	75.0%	89.4%	108.0%	100.0%	83.1%	91.1%
Gross Cash Flow/ Avg. Total Debt [6]	21.9%	23.2%	23.9%	22.5%	22.6%	22.8%
Gross Cash Flow Interest Coverage [7]	5.37 x	5.12 x	5.09 x	4.85 x	4.75 x	5.04 x
Common Dividend Coverage [8]	4.31 x	4.58 x	4.88 x	4.73 x	4.95 x	4.69 x

See Page 2 for Notes.

<u>Standard & Poor's Public Utilities</u>
Capitalization and Financial Statistics
<u>2008-2012, Inclusive</u>

Notes:

(1)   All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group.

(2)   Excluding Accumulated Other Comprehensive Income ("OCI") from the equity account

(3)   Total operating expenses, maintenance, depreciation and taxes other than income taxes as a percent of operating revenues.

(4)   Coverage calculations represent the number of times available earnings, both including and excluding AFUDC (allowance for funds used during construction) as reported in its entirety, cover fixed charges.

(5)   Internal cash generation/gross construction is the percentage of gross construction expenditures provided by internally-generated funds from operations after payment of all cash dividends divided by gross construction expenditures.

(6)   Gross Cash Flow (sum of net income, depreciation, amortization, net deferred income taxes and investment tax credits, less total AFUDC) as a percentage of average total debt.

(7)   Gross Cash Flow (sum of net income, depreciation, amortization, net deferred income taxes and investment tax credits, less total AFUDC) plus interest charges, divided by interest charges.

(8)   Common dividend coverage is the relationship of internally-generated funds from operations after payment of preferred stock dividends to common dividends paid.

Source of Information: Annual Reports to Shareholders
                                    Utility COMPUSTAT

Standard & Poor's Public Utilities
Company Identities

	Ticker	Credit Rating [1] Moody's	S&P	Common Stock Traded	S&P Stock Ranking	Value Line Beta
AGL Resources Inc.	GAS	A3	BBB+	NYSE	A	0.75
Ameren Corporation	AEE	Baa2	BBB	NYSE	B	0.80
American Electric Power	AEP	Baa2	BBB	NYSE	B	0.70
CMS Energy	CMS	Baa1	BBB	NYSE	B	0.75
CenterPoint Energy	CNP	Baa2	BBB+	NYSE	B	0.80
Consolidated Edison	ED	A3	A-	NYSE	B+	0.60
DTE Energy Co.	DTE	A3	BBB+	NYSE	B+	0.75
Dominion Resources	D	A3	A-	NYSE	B+	0.65
Duke Energy	DUK	A3	BBB+	NYSE	B	0.60
Edison Int'l	EIX	A3	BBB+	NYSE	B	0.75
Entergy Corp.	ETR	Baa2	BBB	NYSE	A+	0.70
EQT Corp.	EQT	Baa3	BBB	NYSE	B+	1.15
Exelon Corp.	EXC	A3	BBB	NYSE	B+	0.80
FirstEnergy Corp.	FE	Baa2	BBB-	NYSE	A-	0.80
Integrys Energy Group	TEG	A2	A-	NYSE	B	0.90
NextEra Energy Inc.	NEE	A2	A-	NYSE	A	0.75
NiSource Inc.	NI	Baa2	BBB-	NYSE	B	0.85
Northeast Utilities	NU	Baa2	A-	NYSE	B	0.70
NRG Energy Inc.	NRG	Ba3	BB-	NYSE	NR	1.10
ONEOK, Inc.	OKE	Baa2	BBB	NYSE	NR	0.95
PEPCO Holdings, Inc.	POM	Baa2	BBB+	NYSE	B	0.75
PG&E Corp.	PCG	A3	BBB	NYSE	B	0.55
PPL Corp.	PPL	Baa2	BBB	NYSE	B+	0.65
Pinnacle West Capital	PNW	Baa1	BBB+	NYSE	B	0.70
Public Serv. Enterprise Inc.	PEG	A3	BBB	NYSE	B+	0.75
SCANA Corp.	SCG	Baa2	BBB+	NYSE	A-	0.65
Sempra Energy	SRE	A2	A	NYSE	A-	0.80
Southern Co.	SO	A3	A	NYSE	A-	0.55
TECO Energy	TE	A3	BBB+	NYSE	B	0.85
Wisconsin Energy Corp.	WEC	A2	A-	NYSE	A	0.65
Xcel Energy Inc	XEL	A3	A-	NYSE	B+	0.65
Average for S&P Utilities		Baa1	BBB+		A	0.75

Note: [1] Ratings are those of utility subsidiaries

Source of Information: Moody's Investors Service
Standard & Poor's Corporation
Standard & Poor's Stock Guide
Value Line Investment Survey for Windows

Monthly Dividend Yields for
Electric Group
for the Twelve Months Ending July 2013

Company	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	12-Month Average	6-Month Average	3-Month Average
American Electric Power Co., Inc.	4.39%	4.31%	4.27%	4.42%	4.43%	4.19%	4.03%	3.89%	3.84%	4.29%	4.40%	4.27%			
CenterPoint Energy, Inc. (CNP)-N	3.98%	3.82%	3.77%	4.11%	4.23%	4.10%	3.88%	3.48%	3.39%	3.59%	3.55%	3.37%			
Cleco Corporation (CNL)-NYSE	3.31%	3.23%	3.15%	3.36%	3.39%	3.18%	3.05%	2.88%	2.95%	3.19%	3.14%	3.01%			
Dominion Resources, Inc. (D)-NY	4.02%	4.00%	4.03%	4.13%	4.09%	4.19%	4.02%	3.88%	3.67%	4.02%	3.97%	3.82%			
Duke Energy Corporation (DUK)-I	4.73%	4.75%	4.70%	4.80%	4.83%	4.49%	4.43%	4.24%	4.10%	4.58%	4.56%	4.44%			
Entergy Corporation (ETR)-NYSE	4.89%	4.83%	4.62%	5.24%	5.25%	5.20%	5.35%	5.28%	4.71%	4.83%	4.80%	4.98%			
NextEra Energy, Inc. (NEE)-NYSE	3.57%	3.42%	3.45%	3.49%	3.48%	3.69%	3.67%	3.41%	3.24%	3.49%	3.25%	3.06%			
OGE Energy Corp. (OGE)-NYSE	2.92%	2.85%	2.73%	2.76%	2.81%	2.85%	2.90%	2.40%	2.31%	2.47%	2.46%	2.24%			
SCANA Corp. (SCG)-NYSE	4.22%	4.11%	4.06%	4.32%	4.35%	4.37%	4.20%	3.98%	3.77%	4.06%	4.15%	3.93%			
Southern Company (SO)-NYSE	4.34%	4.28%	4.23%	4.52%	4.61%	4.48%	4.37%	4.21%	4.25%	4.64%	4.63%	4.58%			
TECO Energy, Inc. (TE)-NYSE	5.08%	5.00%	4.98%	5.25%	5.29%	5.01%	5.11%	4.97%	4.64%	5.01%	5.16%	5.04%			
Average	4.13%	4.05%	4.00%	4.22%	4.25%	4.16%	4.09%	3.87%	3.72%	4.02%	4.01%	3.89%	4.03%	3.93%	3.97%

Note: Monthly dividend yields are calculated by dividing the annualized quarterly dividend by the month-end closing stock price adjusted by the fraction of the ex-dividend.

Source of Information: http://finance.yahoo.com/
http://www.nasdaq.com/symbol/bwp/dividend-history

Forward-looking Dividend Yield

	1/2 Growth	D_0/P_0	(.5g)	D_1/P_0	
		3.93%	1.025000	4.03%	
Discrete	D_0/P_0	Adj.	D_1/P_0	
	3.93%	1.031059	4.06%	
Quarterly	D_0/P_0	Adj.	D_1/P_0	
	0.9833%	1.012272	4.04%	
Average			4.04%	
Growth rate			5.00%	
K			9.04%	

$$K = \frac{D_0(1+g)^0 + D_0(1+g)^0 + D_0(1+g)^1 + D_0(1+g)^1 + D_0(1+g)^1}{P_0} + g$$

$$K = \frac{D_0(1+g)^{.25} + D_0(1+g)^{.50} + D_0(1+g)^{.75} + D_0(1+g)^{1.00}}{P_0} + g$$

$$k = \left[\left(1 + \frac{D_0(1+g)^{.25}}{P_0} \right)^4 - 1 \right] + g$$

Historical Growth Rates
Earnings Per Share, Dividends Per Share,
Book Value Per Share, and Cash Flow Per Share

Electric Group	Earnings per Share Value Line		Dividends per Share Value Line		Book Value per Share Value Line		Cash Flow per Share Value Line	
	5 Year	10 Year	5 Year	10 Year	5 Year	10 Year	5 Year	10 Year
American Electric Power	1.00%	2.00%	4.00%	-3.00%	4.50%	2.50%	0.50%	-
CenterPoint Energy	3.00%	-1.50%	7.00%	-4.50%	13.50%	-4.00%	2.00%	-
Cleco Corp.	13.00%	5.50%	4.50%	2.50%	9.00%	8.00%	14.50%	6.00%
Dominion Resources, Inc.	7.00%	5.00%	7.00%	4.50%	3.50%	2.50%	2.50%	2.50%
Duke Energy Corp.	4.50%	-	18.00%	-	-1.00%	-	-	-
Entergy Corp.	5.50%	7.50%	7.50%	10.00%	5.00%	4.00%	10.50%	9.50%
NextEra Energy	10.00%	8.50%	7.50%	7.00%	8.50%	8.00%	7.00%	6.50%
OGE Energy Corp.	7.50%	8.00%	2.50%	1.50%	8.50%	7.00%	9.00%	5.50%
SCANA Corp.	2.50%	3.00%	3.00%	5.00%	4.50%	4.00%	-0.50%	3.00%
Southern Company	3.00%	3.50%	4.00%	3.50%	5.50%	4.50%	3.50%	3.00%
TECO Energy, Inc.	0.50%	-5.50%	2.00%	-4.50%	4.00%	-2.50%	1.50%	-3.50%
Average	5.23%	3.60%	6.09%	2.20%	5.95%	3.40%	5.05%	4.06%

Source of Information: Value Line Investment Survey, May 24, 2013 and June 21, 2013

Analysts' Five-Year Projected Growth Rates
Earnings Per Share, Dividends Per Share,
Book Value Per Share, and Cash Flow Per Share

Electric Group	I/B/E/S First Call	Zacks Earnings Per share	Morningstar	SNL	Earnings Per Share	Dividends Per Share	Value Line Book Value Per Share	Cash Flow Per Share	Percent Retained to Common Equity
American Electric Power	4.06%	3.90%	8.00%	4.00%	4.50%	4.00%	4.00%	4.50%	4.00%
CenterPoint Energy	4.78%	5.30%	6.90%	5.00%	4.50%	4.00%	5.50%	5.50%	5.00%
Cleco Corp.	8.00%	8.00%	-	8.00%	5.50%	10.00%	5.00%	5.00%	4.50%
Dominion Resources, Inc.	6.98%	5.90%	8.30%	6.40%	6.00%	5.50%	4.50%	6.00%	5.00%
Duke Energy Corp.	3.83%	3.10%	5.10%	2.40%	4.00%	2.00%	3.00%	4.00%	2.50%
Entergy Corp.	neg.	NA	0.70%	neg.	neg.	0.50%	3.00%	1.00%	4.00%
NextEra Energy	6.38%	6.20%	6.50%	6.80%	5.00%	8.50%	6.00%	4.50%	5.00%
OGE Energy Corp.	4.55%	5.50%	5.20%	5.00%	5.00%	5.50%	6.50%	2.00%	5.50%
SCANA Corp.	4.75%	4.70%	4.70%	4.50%	4.50%	2.50%	5.50%	3.00%	4.00%
Southern Company	4.60%	4.60%	3.90%	3.90%	4.50%	3.50%	4.00%	4.00%	4.00%
TECO Energy, Inc.	2.63%	3.80%	5.00%	5.00%	3.50%	2.00%	2.50%	3.00%	4.00%
Average	5.06%	5.10%	5.43%	5.10%	4.70%	4.36%	4.50%	3.86%	4.32%

Source of Information :   Yahoo Finance, August 5, 2013
Zacks, August 5, 2013
Morningstar, August 5, 2013
SNL, August 5, 2013
Value Line Investment Survey, May 24, 2013 and June 21, 2013

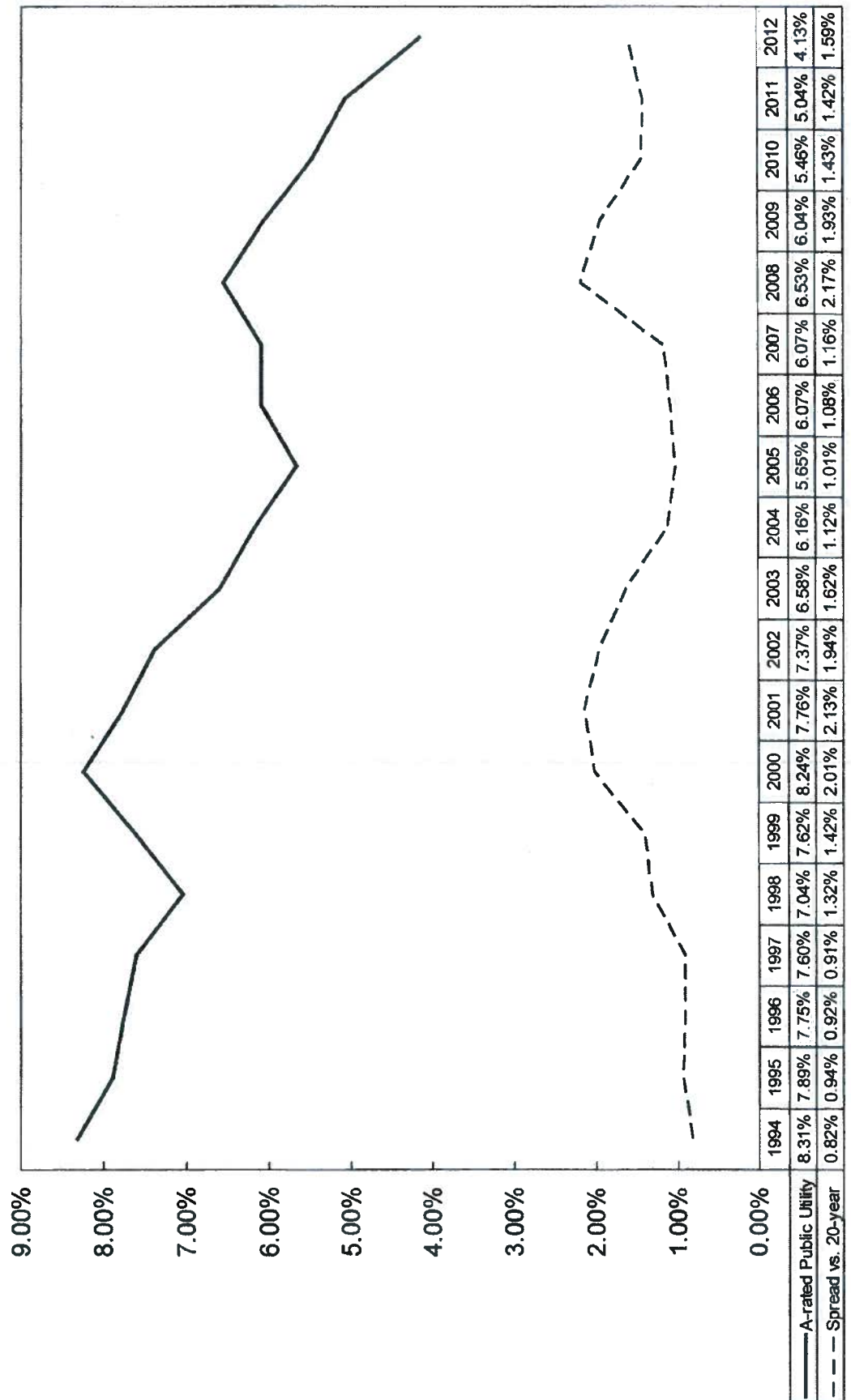## Analysis of Public Offerings of Common Stock
Years 2007-2011

	Vectren Corp	Energy East	Empire District	ITC Holdings	Ottertail Corp	OGE Energy	PNM Resources	IDACORP	Progress Energy
Date of Offering	2/22/2007	3/21/2007	12/6/2007	1/18/2008	9/19/2008	11/20/2008	11/27/2008	12/5/2008	1/7/2009
No. of shares offered (000)	4,600	9,000	3,000	5,583	4,500	2,500	3,417	3,000	12,500
Dollar amt. of offering ($000)	$ 130,318	$ 218,250	$ 69,000	$ 291,669	$ 135,000	$ 62,500	$ 27,883	$ 85,215	$ 468,750
Price to public	$ 28.330	$ 24.250	$ 23.000	$ 50.150	$ 30.000	$ 25.000	$ 8.160	$ 28.405	$ 37.500
Underwriter's discounts and commission	$ 0.990	$ 0.728	$ 0.997	$ 2.131	$ 1.088	$ 1.500	$ -	$ 0.284	$ 1.125
Gross Proceeds	$ 27.340	$ 23.522	$ 22.003	$ 48.019	$ 28.913	$ 23.500	$ 8.160	$ 28.121	$ 36.375
Estimated company issuance expenses	$ 0.092	$ 0.018	$ 0.083	$ 0.161	$ 0.089	$ 0.058	N/A	N/A	$ 0.024
Net proceeds to company per share	$ 27.248	$ 23.504	$ 21.920	$ 47.858	$ 28.824	$ 23.442	$ 8.160	$ 28.121	$ 36.375
Underwriter's discount as a percent of offering price	3.5%	3.0%	4.3%	4.2%	3.6%	6.0%	0.0%	1.0%	3.0%
Issuance expense as a percent of offering price	0.3%	0.1%	0.4%	0.3%	0.3%	0.2%	N/A	N/A	0.1%
Total Issuance and selling expense as as a percent of offering price	3.8%	3.1%	4.7%	4.5%	3.9%	6.2%	0.0%	1.0%	3.1%

	Portland General Elec	Northeast Utilities	American Elec Power	Great Plains Energy	UNITIL	UIL Holdings	Ameren	CenterPoint	Consolidated Edison
Date of Offering	3/5/2009	3/16/2009	4/1/2009	5/12/2009	5/20/2009	5/20/2009	9/9/2009	9/10/2009	11/20/2009
No. of shares offered (000)	10,850	16,500	60,000	10,000	2,400	4,000	19,000	21,000	5,000
Dollar amt. of offering ($000)	$ 152,985	$ 333,300	$1,470,000	$ 140,000	$ 48,000	$ 84,000	$ 479,750	$ 252,000	$ 213,150
Price to public	$ 14.100	$ 20.200	$ 24.500	$ 14.000	$ 20.000	$ 21.000	$ 25.250	$ 12.000	$ 42.630
Underwriter's discounts and commission	$ 0.494	$ 0.657	$ 0.735	$ 0.490	$ 1.050	$ 1.050	$ 0.758	$ 0.420	$ -
Gross Proceeds	$ 13.606	$ 19.543	$ 23.765	$ 13.510	$ 18.950	$ 19.950	$ 24.492	$ 11.580	$ 42.630
Estimated company issuance expenses	$ 0.035	$ 0.020	$ 0.007	$ 0.030	N/A	$ 0.081	$ 0.024	N/A	$ 0.100
Net proceeds to company per share	$ 13.606	$ 19.543	$ 23.765	$ 13.510	$ 18.950	$ 19.950	$ 24.492	$ 11.580	$ 42.630
Underwriter's discount as a percent of offering price	3.5%	3.3%	3.0%	3.5%	5.3%	5.0%	3.0%	3.5%	0.0%
Issuance expense as a percent of offering price	0.2%	0.1%	0.0%	0.2%	N/A	0.4%	0.1%	N/A	0.2%
Total Issuance and selling expense as as a percent of offering price	3.7%	3.4%	3.0%	3.7%	5.3%	5.4%	3.1%	3.5%	0.2%

	Pinnacle West Capital Corp.	SCANA Corp.	CenterPoint	UIL Holdings	Consolidated Edison	Westar	Black hills Corp.	PPL Corp.	
Date of Offering	4/8/2010	5/11/2010	6/9/2010	9/16/2010	9/27/2010	11/4/2010	11/10/2010	2/11/2011	
No. of shares offered (000)	6,000	7,150	22,000	17,700	6,300	7,500	4,000	80,000	
Dollar amt. of offering ($000)	$ 228,000	$ 264,550	$ 283,800	$ 455,775	$ 305,928	$ 191,550	$ 119,000	$2,024,000	
Price to public	$ 38.000	$ 37.000	$ 12.900	$ 25.750	$ 48.560	$ 25.540	$ 29.750	$ 25.300	
Underwriter's discounts and commission	$ 1.330	$ 1.295	$ 0.452	$ 1.094	$ -	$ 0.894	$ 1.040	$ 0.759	
Gross Proceeds	$ 36.670	$ 35.705	$ 12.448	$ 24.656	$ 48.560	$ 24.646	$ 28.710	$ 24.541	
Estimated company issuance expenses	$ 0.032	N/A	$ 0.013	$ 0.018	$ 0.079	N/A	$ 0.069	$ 0.013	
Net proceeds to company per share	$ 36.670	$ 35.705	$ 12.448	$ 24.656	$ 48.560	$ 24.646	$ 28.710	$ 24.541	
									AVERAGE
Underwriter's discount as a percent of offering price	3.5%	3.5%	3.5%	4.2%	0.0%	3.5%	3.5%	3.0%	3.2%
Issuance expense as a percent of offering price	0.1%	N/A	0.1%	0.1%	0.2%	N/A	0.2%	0.0%	0.2%
Total Issuance and selling expense as as a percent of offering price	3.6%	3.5%	3.6%	4.3%	0.2%	3.5%	3.7%	3.0%	3.3%

Interest Rates for Investment Grade Public Utility Bonds
Yearly for 2008-2012
and the Twelve Months Ended July 2013

Years	Aa Rated	A Rated	Baa Rated	Average
2008	6.18%	6.53%	7.24%	6.65%
2009	5.75%	6.04%	7.06%	6.28%
2010	5.24%	5.46%	5.96%	5.55%
2011	4.78%	5.04%	5.57%	5.13%
2012	3.83%	4.13%	4.86%	4.27%
Five-Year Average	5.16%	5.44%	6.14%	5.58%

Months

	Aa Rated	A Rated	Baa Rated	Average
Aug-12	3.65%	4.00%	4.88%	4.18%
Sep-12	3.69%	4.02%	4.81%	4.17%
Oct-12	3.68%	3.91%	4.54%	4.05%
Nov-12	3.60%	3.84%	4.42%	3.95%
Dec-12	3.75%	4.00%	4.56%	4.10%
Jan-13	3.90%	4.15%	4.66%	4.24%
Feb-13	3.95%	4.18%	4.74%	4.29%
Mar-13	3.95%	4.20%	4.72%	4.29%
Apr-13	3.74%	4.00%	4.49%	4.08%
May-13	3.91%	4.17%	4.65%	4.24%
Jun-13	4.27%	4.53%	5.08%	4.63%
Jul-13	4.44%	4.68%	5.21%	4.78%
Twelve-Month Average	3.88%	4.14%	4.73%	4.25%
Six-Month Average	4.04%	4.29%	4.82%	4.39%
Three-Month Average	4.21%	4.46%	4.98%	4.55%

Source: Mergent Bond Record

Yields on
A-rated Public Utility Bonds and
Spreads over 20-Year Treasuries

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
A-rated Public Utility	8.31%	7.89%	7.75%	7.60%	7.04%	7.62%	8.24%	7.76%	7.37%	6.58%	6.16%	5.65%	6.07%	6.07%	6.53%	6.04%	5.46%	5.04%	4.13%
Spread vs. 20-year	0.82%	0.94%	0.92%	0.91%	1.32%	1.42%	2.01%	2.13%	1.94%	1.62%	1.12%	1.01%	1.08%	1.16%	2.17%	1.93%	1.43%	1.42%	1.59%

A rated Public Utility Bonds over 20-Year Treasuries

Year	A-rated Public Utility	20-Year Treasuries Yield	20-Year Treasuries Spread	Year	A-rated Public Utility	20-Year Treasuries Yield	20-Year Treasuries Spread	Year	A-rated Public Utility	20-Year Treasuries Yield	20-Year Treasuries Spread
Dec-98	6.91%	5.36%	1.55%								
Jan-99	6.97%	5.45%	1.52%	Jan-04	6.15%	5.01%	1.14%	Jan-09	6.39%	3.46%	2.93%
Feb-99	7.09%	5.66%	1.43%	Feb-04	6.15%	4.94%	1.21%	Feb-09	6.30%	3.83%	2.47%
Mar-99	7.26%	5.87%	1.39%	Mar-04	5.97%	4.72%	1.25%	Mar-09	6.42%	3.78%	2.64%
Apr-99	7.22%	5.82%	1.40%	Apr-04	6.35%	5.16%	1.19%	Apr-09	6.48%	3.84%	2.64%
May-99	7.47%	6.08%	1.39%	May-04	6.62%	5.46%	1.16%	May-09	6.49%	4.22%	2.27%
Jun-99	7.74%	6.36%	1.38%	Jun-04	6.46%	5.45%	1.01%	Jun-09	6.20%	4.51%	1.69%
Jul-99	7.71%	6.28%	1.43%	Jul-04	6.27%	5.24%	1.03%	Jul-09	5.97%	4.38%	1.59%
Aug-99	7.91%	6.43%	1.48%	Aug-04	6.14%	5.07%	1.07%	Aug-09	5.71%	4.33%	1.38%
Sep-99	7.93%	6.50%	1.43%	Sep-04	5.98%	4.89%	1.09%	Sep-09	5.53%	4.14%	1.39%
Oct-99	8.06%	6.66%	1.40%	Oct-04	5.94%	4.85%	1.09%	Oct-09	5.55%	4.16%	1.39%
Nov-99	7.94%	6.48%	1.46%	Nov-04	5.97%	4.89%	1.08%	Nov-09	5.64%	4.24%	1.40%
Dec-99	8.14%	6.69%	1.45%	Dec-04	5.92%	4.88%	1.04%	Dec-09	5.79%	4.40%	1.39%
Jan-00	8.35%	6.86%	1.49%	Jan-05	5.78%	4.77%	1.01%	Jan-10	5.77%	4.50%	1.27%
Feb-00	8.25%	6.54%	1.71%	Feb-05	5.61%	4.61%	1.00%	Feb-10	5.87%	4.48%	1.39%
Mar-00	8.28%	6.38%	1.90%	Mar-05	5.83%	4.89%	0.94%	Mar-10	5.84%	4.49%	1.35%
Apr-00	8.29%	6.18%	2.11%	Apr-05	5.64%	4.75%	0.89%	Apr-10	5.81%	4.53%	1.28%
May-00	8.70%	6.55%	2.15%	May-05	5.53%	4.56%	0.97%	May-10	5.50%	4.11%	1.39%
Jun-00	8.36%	6.28%	2.08%	Jun-05	5.40%	4.35%	1.05%	Jun-10	5.46%	3.95%	1.51%
Jul-00	8.25%	6.20%	2.05%	Jul-05	5.51%	4.48%	1.03%	Jul-10	5.26%	3.80%	1.46%
Aug-00	8.13%	6.02%	2.11%	Aug-05	5.50%	4.53%	0.97%	Aug-10	5.01%	3.52%	1.49%
Sep-00	8.23%	6.09%	2.14%	Sep-05	5.52%	4.51%	1.01%	Sep-10	5.01%	3.47%	1.54%
Oct-00	8.14%	6.04%	2.10%	Oct-05	5.79%	4.74%	1.05%	Oct-10	5.10%	3.52%	1.58%
Nov-00	8.11%	5.98%	2.13%	Nov-05	5.88%	4.83%	1.05%	Nov-10	5.37%	3.82%	1.55%
Dec-00	7.84%	5.64%	2.20%	Dec-05	5.80%	4.73%	1.07%	Dec-10	5.56%	4.17%	1.39%
Jan-01	7.80%	5.65%	2.15%	Jan-06	5.75%	4.65%	1.10%	Jan-11	5.57%	4.28%	1.29%
Feb-01	7.74%	5.62%	2.12%	Feb-06	5.82%	4.73%	1.09%	Feb-11	5.68%	4.42%	1.26%
Mar-01	7.68%	5.49%	2.19%	Mar-06	5.98%	4.91%	1.07%	Mar-11	5.56%	4.27%	1.29%
Apr-01	7.94%	5.78%	2.16%	Apr-06	6.29%	5.22%	1.07%	Apr-11	5.55%	4.28%	1.27%
May-01	7.99%	5.92%	2.07%	May-06	6.42%	5.35%	1.07%	May-11	5.32%	4.02%	1.30%
Jun-01	7.85%	5.82%	2.03%	Jun-06	6.40%	5.29%	1.11%	Jun-11	5.26%	3.91%	1.35%
Jul-01	7.78%	5.75%	2.03%	Jul-06	6.37%	5.25%	1.12%	Jul-11	5.27%	3.95%	1.32%
Aug-01	7.59%	5.58%	2.01%	Aug-06	6.20%	5.08%	1.12%	Aug-11	4.69%	3.24%	1.45%
Sep-01	7.75%	5.53%	2.22%	Sep-06	6.00%	4.93%	1.07%	Sep-11	4.48%	2.83%	1.65%
Oct-01	7.63%	5.34%	2.29%	Oct-06	5.98%	4.94%	1.04%	Oct-11	4.52%	2.87%	1.65%
Nov-01	7.57%	5.33%	2.24%	Nov-06	5.80%	4.78%	1.02%	Nov-11	4.25%	2.72%	1.53%
Dec-01	7.83%	5.76%	2.07%	Dec-06	5.81%	4.78%	1.03%	Dec-11	4.33%	2.67%	1.66%
Jan-02	7.66%	5.69%	1.97%	Jan-07	5.96%	4.95%	1.01%	Jan-12	4.34%	2.70%	1.64%
Feb-02	7.54%	5.61%	1.93%	Feb-07	5.90%	4.93%	0.97%	Feb-12	4.36%	2.75%	1.61%
Mar-02	7.76%	5.93%	1.83%	Mar-07	5.85%	4.81%	1.04%	Mar-12	4.48%	2.94%	1.54%
Apr-02	7.57%	5.85%	1.72%	Apr-07	5.97%	4.95%	1.02%	Apr-12	4.40%	2.82%	1.58%
May-02	7.52%	5.81%	1.71%	May-07	5.99%	4.98%	1.01%	May-12	4.20%	2.53%	1.67%
Jun-02	7.42%	5.65%	1.77%	Jun-07	6.30%	5.29%	1.01%	Jun-12	4.08%	2.31%	1.77%
Jul-02	7.31%	5.51%	1.80%	Jul-07	6.25%	5.19%	1.06%	Jul-12	3.93%	2.22%	1.71%
Aug-02	7.17%	5.19%	1.98%	Aug-07	6.24%	5.00%	1.24%	Aug-12	4.00%	2.40%	1.60%
Sep-02	7.08%	4.87%	2.21%	Sep-07	6.18%	4.84%	1.34%	Sep-12	4.02%	2.49%	1.53%
Oct-02	7.23%	5.00%	2.23%	Oct-07	6.11%	4.83%	1.28%	Oct-12	3.91%	2.51%	1.40%
Nov-02	7.14%	5.04%	2.10%	Nov-07	5.97%	4.56%	1.41%	Nov-12	3.84%	2.39%	1.45%
Dec-02	7.07%	5.01%	2.06%	Dec-07	6.16%	4.57%	1.59%	Dec-12	4.00%	2.47%	1.53%
Jan-03	7.07%	5.02%	2.05%	Jan-08	6.02%	4.35%	1.67%	Jan-13	4.15%	2.68%	1.47%
Feb-03	6.93%	4.87%	2.06%	Feb-08	6.21%	4.49%	1.72%	Feb-13	4.18%	2.78%	1.40%
Mar-03	6.79%	4.82%	1.97%	Mar-08	6.21%	4.36%	1.85%	Mar-13	4.20%	2.78%	1.42%
Apr-03	6.64%	4.91%	1.73%	Apr-08	6.29%	4.44%	1.85%	Apr-13	4.00%	2.55%	1.45%
May-03	6.36%	4.52%	1.84%	May-08	6.28%	4.60%	1.68%	May-13	4.17%	2.73%	1.44%
Jun-03	6.21%	4.34%	1.87%	Jun-08	6.38%	4.74%	1.64%	Jun-13	4.53%	3.07%	1.46%
Jul-03	6.57%	4.92%	1.65%	Jul-08	6.40%	4.62%	1.78%	Jul-13	4.68%	3.31%	1.37%
Aug-03	6.78%	5.39%	1.39%	Aug-08	6.37%	4.53%	1.84%				
Sep-03	6.56%	5.21%	1.35%	Sep-08	6.49%	4.32%	2.17%	Average:			
Oct-03	6.43%	5.21%	1.22%	Oct-08	7.56%	4.45%	3.11%	12-months			1.46%
Nov-03	6.37%	5.17%	1.20%	Nov-08	7.60%	4.27%	3.33%	6-months			1.42%
Dec-03	6.27%	5.11%	1.16%	Dec-08	6.52%	3.18%	3.34%	3-months			1.42%

Common Equity Risk Premiums
Years 1926-2012

	Large Common Stocks	Long-Term Corp. Bonds	Equity Risk Premium	Long-Term Govt. Bonds Yields
Low Interest Rates	11.72%	4.72%	7.00%	3.03%
Average Across All Interest Rates	11.82%	6.41%	5.41%	5.16%
High Interest Rates	11.92%	8.15%	3.77%	7.35%

Source of Information: 2013 Stocks, Bonds, Bills, and Inflation (SBBI) Classis Yearbook

Basic Series
Annual Total Returns (except yields)

Year	Large Common Stocks	Long-Term Corp. Bonds	Stocks vs. Corp. Bonds	Long-Term Govt. Bonds Yields
1940	-9.78%	3.39%	-13.17%	1.94%
1945	36.44%	4.08%	32.36%	1.99%
1941	-11.59%	2.73%	-14.32%	2.04%
1949	18.79%	3.31%	15.48%	2.09%
1946	-8.07%	1.72%	-9.79%	2.12%
1950	31.71%	2.12%	29.59%	2.24%
1939	-0.41%	3.97%	-4.38%	2.26%
1948	5.50%	4.14%	1.36%	2.37%
2012	16.00%	10.68%	5.32%	2.41%
1947	5.71%	-2.34%	8.05%	2.43%
1942	20.34%	2.60%	17.74%	2.46%
1944	19.75%	4.73%	15.02%	2.46%
1943	25.90%	2.83%	23.07%	2.48%
2011	2.11%	17.95%	-15.84%	2.48%
1938	31.12%	6.13%	24.99%	2.52%
1936	33.92%	6.74%	27.18%	2.55%
1951	24.02%	-2.69%	26.71%	2.69%
1954	52.62%	5.39%	47.23%	2.72%
1937	-35.03%	2.75%	-37.78%	2.73%
1953	-0.99%	3.41%	-4.40%	2.74%
1935	47.67%	9.61%	38.06%	2.76%
1952	18.37%	3.52%	14.85%	2.79%
1934	-1.44%	13.84%	-15.28%	2.93%
1955	31.56%	0.48%	31.08%	2.95%
2008	-37.00%	8.78%	-45.78%	3.03%
1932	-8.19%	10.82%	-19.01%	3.15%
1927	37.49%	7.44%	30.05%	3.16%
1957	-10.78%	8.71%	-19.49%	3.23%
1930	-24.90%	7.98%	-32.88%	3.30%
1933	53.99%	10.38%	43.61%	3.36%
1928	43.61%	2.84%	40.77%	3.40%
1929	-8.42%	3.27%	-11.69%	3.40%
1956	6.56%	-6.81%	13.37%	3.45%
1926	11.62%	7.37%	4.25%	3.54%
1960	0.47%	9.07%	-8.60%	3.80%
1958	43.36%	-2.22%	45.58%	3.82%
1962	-8.73%	7.95%	-16.68%	3.95%
1931	-43.34%	-1.85%	-41.49%	4.07%
2010	15.06%	12.44%	2.62%	4.14%
1961	26.89%	4.82%	22.07%	4.15%
1963	22.80%	2.19%	20.61%	4.17%
1964	16.48%	4.77%	11.71%	4.23%
1959	11.96%	-0.97%	12.93%	4.47%
1965	12.45%	-0.46%	12.91%	4.50%
2007	5.49%	2.60%	2.89%	4.50%
1966	-10.06%	0.20%	-10.26%	4.55%
2009	26.46%	3.02%	23.44%	4.58%
2005	4.91%	5.87%	-0.96%	4.61%
2002	-22.10%	16.33%	-38.43%	4.84%
2004	10.88%	8.72%	2.16%	4.84%
2006	15.79%	3.24%	12.55%	4.91%
2003	28.68%	5.27%	23.41%	5.11%
1998	28.58%	10.76%	17.82%	5.42%
1967	23.98%	-4.95%	28.93%	5.56%
2000	-9.10%	12.87%	-21.97%	5.58%
2001	-11.89%	10.65%	-22.54%	5.75%
1971	14.30%	11.01%	3.29%	5.97%
1968	11.06%	2.57%	8.49%	5.98%
1972	18.99%	7.26%	11.73%	5.99%
1997	33.36%	12.95%	20.41%	6.02%
1995	37.58%	27.20%	10.38%	6.03%
1970	3.86%	18.37%	-14.51%	6.48%
1993	10.08%	13.19%	-3.11%	6.54%
1996	22.96%	1.40%	21.56%	6.73%
1999	21.04%	-7.45%	28.49%	6.82%
1969	-8.50%	-8.09%	-0.41%	6.87%
1976	23.93%	18.65%	5.28%	7.21%
1973	-14.69%	1.14%	-15.83%	7.26%
1992	7.62%	9.39%	-1.77%	7.26%
1991	30.47%	19.89%	10.58%	7.30%
1974	-26.47%	-3.06%	-23.41%	7.60%
1986	18.67%	19.85%	-1.18%	7.89%
1994	1.32%	-5.76%	7.08%	7.99%
1977	-7.16%	1.71%	-8.87%	8.03%
1975	37.23%	14.64%	22.59%	8.05%
1989	31.69%	16.23%	15.46%	8.16%
1990	-3.10%	6.78%	-9.88%	8.44%
1978	6.57%	-0.07%	6.64%	8.98%
1988	16.61%	10.70%	5.91%	9.18%
1987	5.25%	-0.27%	5.52%	9.20%
1985	31.73%	30.09%	1.64%	9.56%
1979	18.61%	-4.18%	22.79%	10.12%
1982	21.55%	42.56%	-21.01%	10.95%
1984	6.27%	16.86%	-10.59%	11.70%
1983	22.56%	6.26%	16.30%	11.97%
1980	32.50%	-2.76%	35.26%	11.99%
1981	-4.92%	-1.24%	-3.68%	13.34%

Yields for Treasury Constant Maturities
Yearly for 2008-2012
and the Twelve Months Ended July 2013

Years	1-Year	2-Year	3-Year	5-Year	7-Year	10-Year	20-Year	30-Year
2008	1.82%	2.00%	2.24%	2.80%	3.17%	3.67%	4.36%	4.28%
2009	0.47%	0.96%	1.43%	2.19%	2.81%	3.26%	4.11%	4.08%
2010	0.32%	0.70%	1.11%	1.93%	2.62%	3.21%	4.03%	4.25%
2011	0.18%	0.45%	0.75%	1.52%	2.16%	2.79%	3.62%	3.91%
2012	0.18%	0.28%	0.38%	0.76%	1.22%	1.80%	2.54%	2.92%
Five-Year Average	0.59%	0.88%	1.18%	1.84%	2.40%	2.95%	3.73%	3.89%
Months								
Aug-12	0.18%	0.27%	0.37%	0.71%	1.14%	1.68%	2.40%	2.77%
Sep-12	0.18%	0.26%	0.34%	0.67%	1.12%	1.72%	2.49%	2.88%
Oct-12	0.18%	0.28%	0.37%	0.71%	1.15%	1.75%	2.51%	2.90%
Nov-12	0.18%	0.27%	0.36%	0.67%	1.08%	1.65%	2.39%	2.80%
Dec-12	0.16%	0.26%	0.35%	0.70%	1.13%	1.72%	2.47%	2.88%
Jan-13	0.15%	0.27%	0.39%	0.81%	1.30%	1.91%	2.68%	3.08%
Feb-13	0.16%	0.27%	0.40%	0.85%	1.35%	1.98%	2.78%	3.17%
Mar-13	0.15%	0.26%	0.39%	0.82%	1.32%	1.96%	2.78%	3.16%
Apr-13	0.12%	0.23%	0.34%	0.71%	1.15%	1.76%	2.55%	2.93%
May-13	0.12%	0.25%	0.40%	0.84%	1.31%	1.93%	2.73%	3.11%
Jun-13	0.14%	0.33%	0.58%	1.20%	1.71%	2.30%	3.07%	3.40%
Jul-13	0.12%	0.34%	0.64%	1.40%	1.99%	2.58%	3.31%	3.61%
Twelve-Month Average	0.15%	0.27%	0.41%	0.84%	1.31%	1.91%	2.68%	3.06%
Six-Month Average	0.14%	0.28%	0.46%	0.97%	1.47%	2.09%	2.87%	3.23%
Three-Month Average	0.13%	0.31%	0.54%	1.15%	1.67%	2.27%	3.04%	3.37%

Source: Federal Reserve statistical release H.15

Measures of the Risk-Free Rate & Corporate Bond Yields
The forecast of Treasury and Corporate yields
per the consensus of nearly 50 economists
reported in the Blue Chip Financial Forecasts dated August 1, 2013

		Treasury					Corporate	
Year	Quarter	1-Year Bill	2-Year Note	5-Year Note	10-Year Note	30-Year Bond	Aaa Bond	Baa Bond
2013	Third	0.2%	0.4%	1.3%	2.5%	3.6%	4.3%	5.3%
2013	Fourth	0.2%	0.4%	1.4%	2.6%	3.7%	4.4%	5.3%
2014	First	0.2%	0.5%	1.5%	2.7%	3.8%	4.5%	5.4%
2014	Second	0.3%	0.6%	1.7%	2.8%	3.9%	4.6%	5.5%
2014	Third	0.3%	0.7%	1.8%	2.9%	4.0%	4.7%	5.6%
2014	Fourth	0.4%	0.8%	1.9%	3.1%	4.1%	4.8%	5.7%

Measures of the Market Premium

Value Line Return

As of:	Dividend Yield		Median Appreciation Potential		Median Total Return
July 26, 2013	2.1%	+	8.78%	=	10.88%

DCF Result for the S&P 500 Composite

D/P	(	1+.5g	)	+	g	=	k
2.04%	(	1.0466	)	+	9.32%	=	11.46%

where:	Price (P)	at	31-Jul-13	=	1685.73
	Dividend (D)	for	2nd Qtr. '13	=	8.61
	Dividend (D)		annualized	=	34.44
	Growth (g)	by	First Call	=	9.32%

Summary

Value Line			10.88%
S&P 500			11.46%
Average			11.17%
Risk-free Rate of Return (Rf)			4.00%
Forecast Market Premium			7.17%

Historical Market Premium	(Rm)	(Rf)	
1926-2012 Arith. mean	11.72%	3.03%	8.69%

Average - Forecast/Historical	7.93%

Comparable Earnings Approach
Using Non-Utility Companies with
Timeliness of 3 & 4; Safety Rank of 1, 2 & 3; Financial Strength of B++ & A;
Price Stability of 90 to 100; Betas of .55 to .85; and Technical Rank of 2 & 3

Company	Industry	Timeliness Rank	Safety Rank	Financial Strength	Price Stability	Beta	Technical Rank
Alleghany Corp.	INSPRPTY	3	2	A	90	0.80	3
Brown & Brown	FINSERV	3	2	A	95	0.70	3
Clorox Co.	HOUSEPRD	3	2	B++	100	0.60	3
Cullen/Frost Bankers	BANK	4	1	A	95	0.80	3
Dollar General	RETAIL	3	2	B++	95	0.60	3
Ecolab Inc.	CHEMSPEC	3	1	A	95	0.80	3
Erie Indemnity	INSPRPTY	4	2	B++	100	0.75	3
Forest Labs.	DRUG	4	3	A	90	0.80	3
Gallagher (Arthur J.)	FINSERV	3	1	A	90	0.75	3
Henry (Jack) & Assoc.	ITSERV	3	2	B++	95	0.85	3
Hershey Co.	FOODPROC	3	2	B++	100	0.60	3
IAC/InterActiveCorp	INTERNET	3	2	B++	90	0.75	2
Int'l Flavors & Frag.	CHEMSPEC	3	1	A	95	0.80	3
Laboratory Corp.	MEDSERV	3	1	A	100	0.70	3
McCormick & Co.	FOODPROC	4	1	A	100	0.60	3
Mercury General	INSPRPTY	3	2	B++	90	0.65	3
Owens & Minor	MEDICNON	3	2	A	90	0.75	3
Paychex Inc.	ITSERV	3	1	A	95	0.85	3
Philip Morris Int'l	TOBACCO	4	2	B++	95	0.75	3
Quest Diagnostics	MEDSERV	3	2	B++	95	0.75	3
Rollins Inc.	INDUSRV	4	2	A	90	0.85	3
Ross Stores	RETAILSL	3	2	A	90	0.80	3
SAIC Inc.	INDUSRV	3	2	B++	95	0.70	3
Stericycle Inc.	ENVIRONM	3	2	B++	95	0.65	3
Synopsys Inc.	SOFTWARE	3	1	A	95	0.80	2
Total System Svcs.	FINSERV	3	3	B++	90	0.85	3
WD-40 Co.	HOUSEPRD	4	2	A	90	0.70	3
Average		3	2	B++	94	0.74	3
Electric Group	Average	3	2	B++	98	0.69	3

Source of Information: Value Line Investment Survey for Windows, July 2013

Comparable Earnings Approach
Five -Year Average Historical Earned Returns
for Years 2008-2012 and
Projected 3-5 Year Returns

Company	2008	2009	2010	2011	2012	Average	Projected 2016-18
Alleghany Corp.	4.4%	4.4%	4.6%	4.9%	2.6%	4.2%	7.0%
Brown & Brown	13.4%	11.2%	10.7%	10.0%	10.2%	11.1%	12.5%
Clorox Co.	-	-	726.5%	NMF	NMF	726.5%	NMF
Cullen/Frost Bankers	11.8%	9.5%	10.1%	9.5%	9.8%	10.1%	9.5%
Dollar General	3.8%	10.0%	15.5%	16.4%	19.1%	13.0%	18.0%
Ecolab Inc.	29.5%	23.9%	24.9%	10.5%	14.7%	20.7%	15.0%
Erie Indemnity	18.0%	12.0%	17.8%	21.4%	24.9%	18.8%	23.5%
Forest Labs.	25.6%	21.8%	23.3%	18.0%	0.7%	17.9%	7.5%
Gallagher (Arthur J.)	15.1%	14.9%	14.8%	11.9%	11.8%	13.7%	13.0%
Henry (Jack) & Assoc.	17.5%	16.5%	15.7%	15.6%	15.8%	16.2%	15.5%
Hershey Co.	135.3%	69.3%	65.1%	76.4%	71.4%	83.5%	41.5%
IAC/InterActiveCorp	3.1%	0.8%	0.9%	9.1%	9.6%	4.7%	12.5%
Int'l Flavors & Frag.	38.6%	27.9%	26.4%	24.1%	26.1%	28.6%	20.5%
Laboratory Corp.	30.4%	25.3%	23.7%	25.8%	24.4%	25.9%	20.5%
McCormick & Co.	26.7%	23.2%	24.4%	23.1%	24.0%	24.3%	22.5%
Mercury General	7.7%	10.0%	6.4%	8.2%	6.3%	7.7%	10.0%
Owens & Minor	14.7%	14.3%	14.4%	13.4%	11.3%	13.6%	15.5%
Paychex Inc.	48.1%	39.8%	34.0%	34.4%	34.2%	38.1%	37.0%
Philip Morris Int'l	91.9%	111.0%	207.0%	NMF	NMF	136.6%	NMF
Quest Diagnostics	17.8%	18.3%	17.9%	19.7%	16.8%	18.1%	16.0%
Rollins Inc.	30.2%	30.2%	30.2%	31.1%	31.4%	30.6%	29.0%
Ross Stores	30.7%	38.3%	41.6%	44.0%	44.5%	39.8%	27.0%
SAIC Inc.	21.4%	21.8%	22.8%	21.8%	20.2%	21.6%	14.5%
Stericycle Inc.	22.8%	21.1%	20.4%	20.2%	18.7%	20.6%	14.5%
Synopsys Inc.	13.1%	10.8%	9.1%	10.2%	9.8%	10.6%	9.5%
Total System Svcs.	25.6%	18.7%	15.9%	16.9%	17.1%	18.8%	14.5%
WD-40 Co.	17.4%	15.2%	18.4%	18.1%	19.1%	17.6%	18.0%
Average						51.6%	17.8%
Median						18.8%	15.5%
Average (excluding values <8% and >20%)						14.3%	14.2%

Electric Group D
Financial Risk Adjustment

	American Electric Power Co., Inc (NYSE:AEP)	CenterPoint Energy, Inc (NYSE:CNP)	Cleco Corporation (NYSE:CNL)	Dominion Resources, Inc (NYSE:D)	Duke Energy Corporation (NYSE:DUK)	Entergy Corporation (NYSE:ETR)	NextEra Energy, Inc (NYSE:NEE)	OGE Energy Corporation (NYSE:OGE)	SCANA Corporation (NYSE:SCG)	The Southern Company (NYSE:SO)	TECO Energy, Inc (NYSE:TE)	Average
Fiscal Year	12/31/12	12/31/12	12/31/12	12/31/12	12/31/12	12/31/12	12/31/12	12/31/12	12/31/12	12/31/12	12/31/12	
Capitalization at Fair Values												
Debt(D)	20,907,000	10,807,000	1,579,674	22,192,000	44,001,000	12,849,330	28,874,000	3,396,700	6,115,000	23,480,000	3,439,400	16,149,191
Preferred(P)	0	0	0	255,000	93,000	280,511	0	0	1,082,000	1,082,000	0	155,501
Equity(E)	20,728,326	8,239,000	2,414,825	29,836,800	44,915,200	11,335,231	29,338,560	5,557,797	6,024,480	37,159,080	3,630,216	18,107,047
Total	41,635,326	19,046,000	3,994,499	52,283,800	89,009,200	24,465,072	58,210,560	8,954,497	12,139,480	61,721,080	7,069,616	34,411,739
Capital Structure Ratios												
Debt(D)	50.21%	56.74%	39.55%	42.45%	49.43%	52.52%	49.60%	37.93%	50.37%	38.04%	48.65%	46.85%
Preferred(P)	0.00%	0.00%	0.00%	0.49%	0.10%	1.15%	0.00%	0.00%	0.00%	1.75%	0.00%	0.32%
Equity(E)	49.79%	43.26%	60.45%	57.07%	50.46%	46.33%	50.40%	62.07%	49.63%	60.20%	51.35%	52.82%
Total	100.00%	100.00%	100.00%	100.01%	99.99%	100.00%	100.00%	100.00%	100.00%	99.99%	100.00%	100.00%
Common Stock												
Issued	506,004,962	428,000,000	60,961,570	576,000,000	704,000,000	254,752,788	424,000,000	98,800,000	132,000,000	878,000,000	216,600,000	
Treasury	20,336,592	0.000	606,025	0.000	0.000	76,945,239	0.000	100,000	0.000	10,000,000	0.000	
Outstanding	485,668,370	428,000,000	60,355,545	576,000,000	704,000,000	177,807,549	424,000,000	98,700,000	132,000,000	868,000,000	216,600,000	
Market Price	$42.68	$19.25	$40.01	$51.80	$63.80	$63.75	$69.19	$56.31	$45.64	$42.81	$16.78	

M&M

AEP: ku 8.69% = ke 11.39% 11.39% 11.39% 11.39%

CNL: ku 8.69% 4.63% 3.01% 2.67%

CNP: (((

DUK: 4.06%

NEE: 1-t 0.65 0.65

SCANA: D 46.86% 0.8872 0.8872

TECO: E 52.82%

ku 8.69% 3.01% 3.01% 0.02% · d 5.68% · P 0.32% 0.0061 0.0061 · E 52.82%

Table 7-6: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
Long-Term Returns in Excess of CAPM

| Decile	Beta*	Arith-metic Mean Return (%)	Actual Return in Excess of Riskless Rate** (%)	CAPM Return in Excess of Riskless Rate† (%)	Size Premium (Return in Excess of CAPM) (%)
Mid-Cap, 3-5	1.12	13.73	8.61	7.50	1.12
Low-Cap, 6-8	1.23	15.19	t0 07	8 23	1 85
Micro-Cap, 9-10	1.36	18.03	t2 91	9.10	3 81

Data from 1926–2012

*Betas are estimated from monthly returns in excess of the 30-day U S Treasury bill
total return, January 1926–December 2012

**Historical riskless rate measured by the 87-year arithmetic mean income return
component of 20-year government bonds (5 12 percent)

†Calculated in the context of the CAPM by multiplying the equity risk premium by
beta. The equity risk premium is estimated by the arithmetic mean total return of
the S&P 500 (11.82 percent) minus the arithmetic mean income return component
of 20-year government bonds (5 12 percent) from 1976 2012

Graph 7-2: Security Market Line Versus Size-Decile Portfolios of the
NYSE/AMEX/NASDAQ
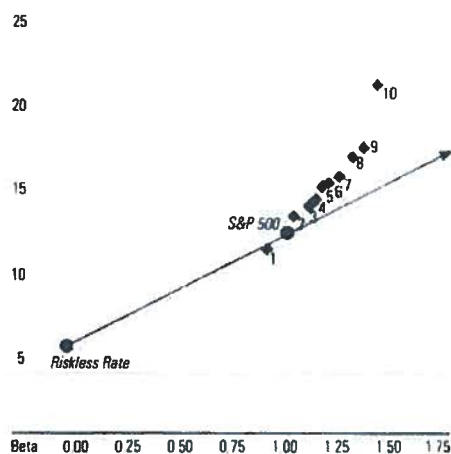
Data from 1926–2012

Serial Correlation in Small Company Stock Returns

The serial correlation, or first-order autocorrelation, of returns on large capitalization stocks is near zero. [See Table 7-1.] If stock returns are serially correlated, then one can gain some information about future performance based on past returns. For the smallest stocks, the serial correlation is near or above 0.1. This observation bears further examination.

Table 7-7: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
Serial Correlations of Annual Returns in Excess of Decile 1 Returns

Decile	Serial Correlations of Annual Returns in Excess of Decile 1 Return
2	0 22
3	0 27
4	0 25
5	0 25
6	0 33
7	0 27
8	0 34
9	0 29
10	0 38

Data from 1926–2012 Source Morningstar and CRSP Calculated (or Derived)
based on data from CRSP US Stock Database and CRSP US Indices Database
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To remove the randomizing effect of the market as a whole, the returns for decile 1 are geometrically subtracted from the returns for deciles 2 through 10. The result illustrates that these series differences exhibit greater serial correlation than the decile series themselves. Table 7-7 above presents the serial correlations of the excess returns for deciles 2 through 10. These serial correlations suggest some predictability of smaller company excess returns. However, caution is necessary. The serial correlation of small company excess returns for non-calendar years (February through January, etc.) do not always confirm the results shown here for calendar (January through December) years. The results for the non-calendar years (not shown in this book) suggest that predicting small company excess returns may not be easy.

STATE OF NEW JERSEY	)	
	)	**VERIFICATION**
	)	
COUNTY OF CAMDEN	)	

PERSONALLY appeared before me, Paul R. Moul, who being duly sworn states: That he is the

Managing Consultant of P. Moul & Associates; that the testimony attached hereto as Testimony

of Paul R. Moul is based upon information that he believes to be true and correct.

Paul R. Moul

Paul R. Moul

Sworn to before me this
7th day of March, 2014

Ruby Marie Tucker

Ruby Marie Tucker

My Commission Expires: